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**JULY 1957** 

THE MAGAZINE OF TASTE AND SCENT



Cosmetic Compatibility ... Page 37 . Lanolin ... Page 41

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### COVER: THE LITTLE MER-

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This lovely statue illustrates
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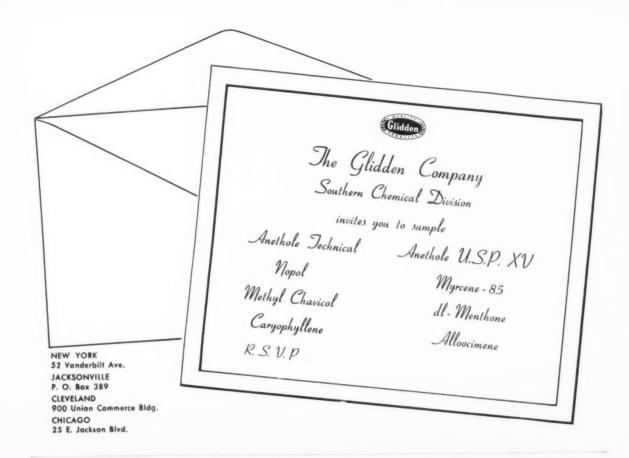
### THE CHINESE MERCHANT PRINCE

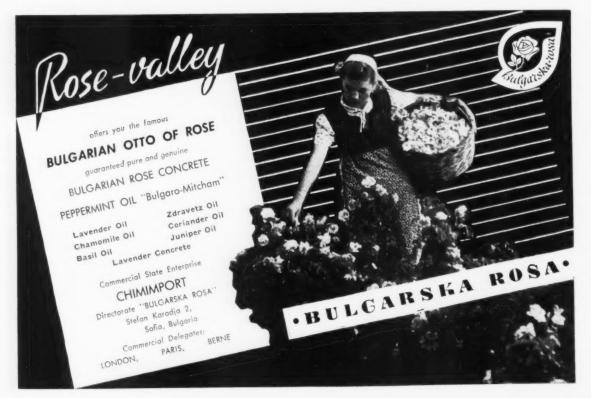
In a far-off land a merchant prince by the name of Fray Grins had received all three blessings . . . he was wealthy, healthy and wise. His sons went to the best schools, his daughters married the most eligible men, his wife had the most sparkling jewels, and he, himself, collected rare editions of esoteric books.

Fray Grins' wealth came from the manufacture and sale of perfumes. His packages were masterpieces, his perfumes were known throughout the world, and the wealth of Fray Grins, like the proverbial Break-The-Bank, grew and grew, and grew. But all things must end and so, too, did his life at the august age of eighty four less two moons. His eldest son took over and decided that profits must be larger. A little less perfume here, a little

cheaper oil there and "qui sait" as the French say. The firm of Fray Grins no longer bought from the best houses. Then they no longer bought from any house—they went out of business. And the sparkling jewels and the rare editions were sold to the highest bidders.

If there be a moral to this tale we would conclude that it is "Shortcut in Quality is False Economy". . . Yet we would be bold to say that at Syntomatic we feel there is a practical parallel in combining top quality with true economy. Prove it? Our pleasure . . . Syntomatic Corporation, 114 East 32nd Street, New York 16, New York . MUrray Hill 3-7618.







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### MINUTE NEWS . . .

Revion Buys Shering Corp. Stock to Enter Ethical Drug Field Revlon Inc. has purchased 150,000 shares of Shering Corp. stock for investment, to enter the ethical drug field. The purchase price is said to have been over \$9,000,000. The block of stock gives Revlon slightly less than 9% ownership in Shering's common stock. In 1956 Revlon's sales were \$86,131,000 with earnings of \$8,375,000. Revlon was founded in 1932 by Charles Revson, now president, and three associates with \$300 in a small room in West 44th St., New York, where they made nail polish which they sold C. O. D. to beauty parlors. The Shering Corp. was organized in 1929 as a wholly owned subsidiary of a large German drug company. It was seized in 1942 by the Alien Property Custodian and later operated by the Justice Department. In March 1952 an underwriting syndicate offered 1,760,000 Shering shares to the public at \$17.50 per share. For this stock the underwriters paid \$29,131,000 which went into the U. S. Treasury. Sales of Shering products in 1956 were \$54,553,000 and earnings were \$10,624,000. In its plant at Bloomfield, N. J. Shering makes pharmaceutical, cosmetic and veterinary products.

Plough Inc. Buys Coppertone Sales Corp. of Miami A joint statement by Abe Plough, president of Plough Inc., Memphis, Tenn. and Charles E. Clowe president of the Coppertone Sales Co. of Miami confirmed the reports of the sale of Coppertone Sales Co. to Plough Inc. The sales price was not given but 77,682 shares of Plough stock were exchanged for all of the outstanding stock of Coppertone Sales Co. and its manufacturing affiliate, Douglas Laboratories Corp. World wide rights to the manufacture and sale of Coppertone products -lotion, oil and related suntan cosmetics-were acquired by Plough. For distribution to the British empire the products are manufactured in Canada. The products are also sold throughout the United States and 20 Latin American, Middle East and Far East countries. This was the sixth addition to Plough Inc. since January 1956. The others were: Musterole Co., E. W. Rose Co., Dr. Edwards Olive Tablet Co. and radio stations WCAO in Baltimore and WCOP in Boston. Charles E. Clowe will become a vice president of Plough Inc. Stuart W. Patton Coppertone general counsel and director has been elected a director of Plough Inc. Plough Inc. has filed an application with the New York Stock Exchange for listing of additional shares of Plough stock.

Foot Cosmetics Go High Fashion under Miss Hazel Bishop Miss Hazel Bishop has directed her talents and rich background in chemistry from glamourizing faces to glamourizing feet. She has organized the H. G. B. Corp. to manufacture three products: Fancy Feet for the removal of dry skin on feet or other dry areas and also designed to whiten and soften the skin; Wingfoot Powder, a new form of spray powder to relieve itching, burning feet which contains a bacteriastic agent to help cure and prevent infection, fungus growth and athletes' foot; and Wingfoot Spray Cool which is stated to dry instantly when sprayed over the stockings. It is designed to give buoyancy and new life to burning, aching feet. The first is packaged in an attractive polyethylene bottle and the last two in aerosol containers. A 4 oz. bottle of Fancy Feet retails for \$1.50; Wingfoot Powder in a 6 oz. container sells for \$1.75; and Wingfoot Spray Cool in a 6-oz. container retails for \$1.50. The products are distributed by the Hadox Corp. of which Harry B. Johansen is president. Currently they are being presented through hosiery and shoe departments. A leather Lav shoe cleaning product created by Miss Bishop is also being distributed. Miss Bishop is no longer connected with Hazel Bishop, Inc.

Nestle LeMur Co. Increased Shares of Stock to One Million Nestle-LeMur Co. stockholders who own all of the outstanding 440,000 shares of stock increased the shares to one million at the May stockholders' meeting. There is no present plan to issue any of the newly authorized shares.

By 1960 Radiation May Displace Chemicals in Food Preservation In a committee report on radiation preservation of foods of the Department of Defense recently released, it is felt that radiation as a substitute for chemical and other processes of preserving food may be only 30 months away. The committee feels that it needs 30 months more to complete tests on the wholesomeness and economic feasibility of radiation preserved foods. During 1956 the Army Quartermaster Corps completed a preliminary study of 80 selected foods obtaining information in the field of food irradiation.

Advice on Life and Good Living Given by John H. Breck Co. Prexy Sound advice for success in making a good life and a fine living was given by Edward J. Breck, president of John H. Breck, Inc. Springfield, Mass. in his commencement address to the graduates of St. Michaels College, Winoski, Vt. The address followed the conferring of an honorary degree of Doctor of Laws on Mr. Breck. In concluding his address Dr. Breck offered some rules which he felt would contribute to making a good life and a fine living. First, always permit your work to speak for itself; Second, extend yourself; Third, hold on to the intellectual curiosity which you have developed; and Fourth, don't be too easily satisfied. Nothing of importance in the arts, in the sciences, in commerce or in any other field has been accomplished by an easily satisfied man.

Legislation to Control Chemical Additives Sought by F. D. A.

Legislation to control chemical additives in foods is called for by Commissioner George Larrick of the Food & Drug Administration, in a copyrighted article in U.S. News and World Report. In it he states that he hopes Congress will pass a law this year that will give the Food & Drug Administration the same requirements for foods that we now have for drugs. He estimates that around 700 chemical additives now go into foods. Of these he believes that about 150 have not been adequately tested.

Chance for Success in Puerto Rico Twice that in U. S.

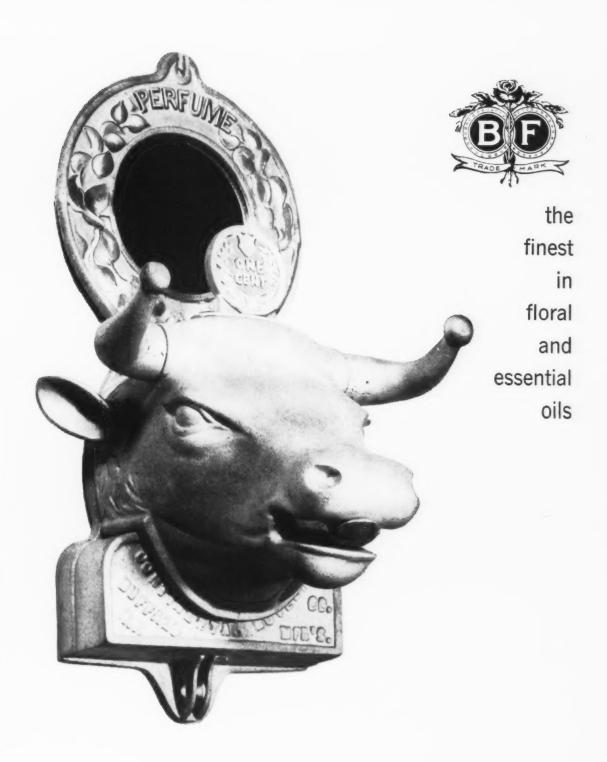
A manufacturer's chances for success is twice as great in Puerto Rico as in continental United States according to a review by the Economic Development Administration of Puerto Rico. This was shown by the performance of more than 400 industrial plants in the period 1950-1956. Affiliated companies operating in both places disclosed that 32 with assets over \$1 million are realizing 20 cents on the sales dollar in Puerto Rico. Firms with assets below \$250,000 are realizing 9 cents. The U. S. industrial average is 5 cents. Puerto Rico has a tax free industrialization program.

New Cosmetic to Stop Habit of Biting Finger Nails For habitual nail biters a new cream base, natural color, plastic artificial nail coating called Brush-on "Stop Bite" is offered by Hand Care, Inc. The coating is applied to a clean, short or stubby nail and is said to dry quickly and very hard. Because it is hard to bite it is claimed that it automatically discourages nail biting. Biters become conscious of the coating and gradually discontinue the nail biting habit, the company states. Finger nails grow slowly but steadily about one two-hundredths of an inch a day. A nail will be completely replaced from base to tip in four to five months. Nail growth is slightly faster in youth and slows up with advancing age.

Post Office Objects to Cost of Distributing Sample Soap

Postmaster Frank Lattanzi of New Haven, Conn. has estimated that it costs the Post Office at least \$5,000 to deliver 70,000 free bars of soap in New Haven. The soap is mailed as free samples from Cincinnati at a postage rate of three cents a bar; but he says it costs the Post Office between ten and twelve cents a bar for handling. The samples are addressed to "occupants" at most street addresses in the city. He said also that last year the New Haven Post Office lost money distributing 69,000 samples of toothpaste and 69,000 free bottles of aspirin.

Insect Repellent in Tissue Form Launched in St. Louis An insect repellent in tissue form has been launched by the Orchard Paper Co., St. Louis, Mo. By wiping exposed parts of the body with the tissue it is stated effective protection for four hours is secured. The light weight creped wiping tissue is treated with repellents whose properties are similar to those for insect sprays and ointments. The tissues are retailed in packs of ten for 25¢.



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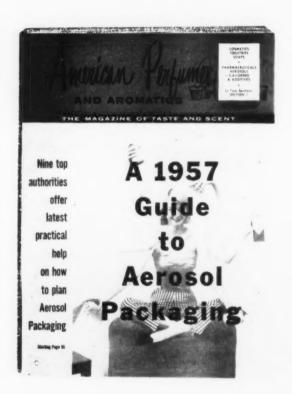
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# Imagination

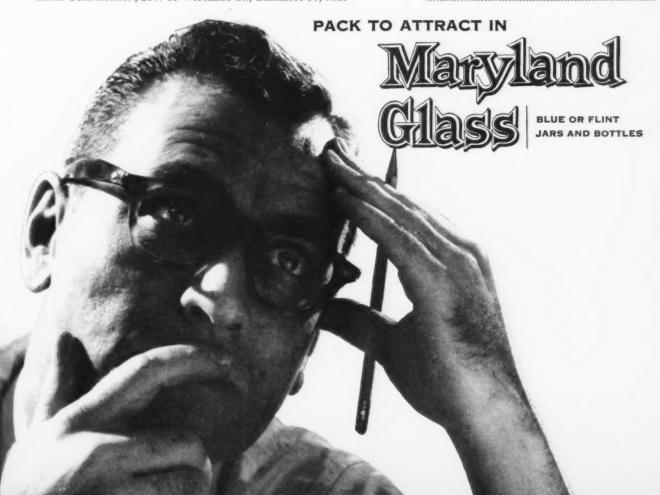
AN INTEGRAL PART OF THE CONTAINER WHEN MARYLAND GLASS TAKES OVER YOUR DESIGN PROBLEM!

When you drop a packaging problem in our lap, the end result is more than a glass container. It is an *idea*... born of restless imagination, shaped by skilled hands, backed by years of sound experience. Our creative staff gives you a selling package that packs well, ships well and pushes your product on the shelf. For a successful solution to your design problem, contact MARYLAND GLASS CORPORATION, 2147-53 Wicomico St., Baltimore 30, Md.



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# In Skillful Hands

The true beauty of a successful fragrance depends not only on artistic abilities and technical skills, but also on a knowledge of markets, consumer preferences and the psychology of scent.

With these abilities, the staff of VAH can be helpful to you in the development of your next perfume need.



VAH products are fully tested for their ultimate use. Here the hands of a laboratory technician produce a pressed face powder cake in which a new fragrance is being tested in the VAH Cosmetic Service Laboratory.

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Myvacet Distilled Acetylated
 Monoglycerides, Type 9-40



 Myverol Distilled Monoglycerides, Type 18-05 (Free-flowing beads)

## These are keys to "newness" in cosmetics

Aonoglycerides, Type 5-00



 Myverol Distilled Monoglycerides, Type 18-40

Monoglycerides are not new. "Glyceryl monostearate" has been used by cosmetic formulators for years in making water-in-oil emulsions.

But a monoglyceride that's over 90% monoester is something so different that it can give a new direction to your products. We make it by molecular distillation to produce a uniform, stable, bland emulsifier that's non-ionic, neutral, and contains no residual soaps or catalysts—meets N.F. standards, of course. We call it Myverol\* Distilled Monoglycerides. Try it in creams, lotions, lipsticks, ointments and other products based on water-in-oil emulsions. Its very purity is what gives it a unique behavior.

We make Myverol Distilled Monoglycerides in a number of types that are being used in cosmetics. Often, combinations of types can give you close control of viscosity and consistency. Now Myracet Distilled Acetylated Monoglycerides—there is an entirely new type of ingredient for cosmetics. It's strangely nongreasy, not an emulsifier, but easily emulsified. Type 9-40 is completely miscible with castor oil and with alcohol-water mixtures containing as much as 20% water. It does what isopropyl myristate and isopropyl palmitate do in many preparations but without contributing greasiness. Type 5-00 is a highly flexible, easily emulsified solid.

The way to find out what these materials can do for your products is to try them. The way to try them is to write us for samples. *Distillation Products Industries,* Rochester 3, N. Y. Sales offices: New York, Chicago, and Memphis • Gillies, Inc., Los Angeles, Portland, and San Francisco • Charles Albert Smith Limited, Montreal and Toronto.

distillers of monoglycerides made from natural fats and oils



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Distillation Products Industries is a division of Eastman Kodak Company



# **AERO SCRIPTS**

Jack Pickthall\*



nterest in pressure packed products continues in the U.K. and other European countries. There are many pointers to increased sales and I am happy to say that one of them is the amount of special Aerosol perfumes being purchased. The first three months of 1957 have been so successful in this direction that I am certain the Aerosol figures for this year will eventually show a very considerable increase over 1956. Measured by my own vard stick, the accent is still on insecticides with a general tendency to use better perfumes in these products. In fact, certain manufacturers are placing considerable emphasis on the odour of their insecticides and adding air-freshening properties to their claims. The other large sellers are room-deodorants, hairlacquers and shave-creams or the "dose as before." With the advent of suitable valves and coated glass bottles, it is only natural that toilet waters and handkerchief perfumes should be appearing. The latter will not really hit the headlines until the metering valve is readily available in the U.K.

The progress in cosmetics as a whole has been disappointing, but there is considerable activity in the "enquiry" stage. It is true to say that a large percentage of our normal cosmetics are sold in emulsified form-cold creams, foundation creams, make-up preparations, beauty milks etc., and all these are elegant preparations. What the manufacturer would like to see is his product packed in a pressurized container which would deliver the emulsion in precisely the same form as he now sells it. That this is an impossibility is known to all workers in the Aerosol field and in many cases it is necessary to explain the position to interested parties. The first of the emulsified products dispensed by the Aerosol technique was the shave-cream and this lent itself ideally to pressure dispensation. Here we are dealing with a modified aqueous soap solution which is capable of emulsifying the liquid propellant in the container. On forcing the emulsion from the valve the rapidly expanding propellant is trapped in the soap solution in the form of thousands of tiny bubbles. To a large extent shampoos are dispensed in the same way and in both cases the consumer receives the dose just as he or she wants it. This technique of dispensing an O/W emulsion as a foam can be and is, extended to products such as hand creams and While the former perfumed foams. come closer to the more conventional type of emulsified product, they are still in an aerated condition. Nevertheless, attractive O/W emulsions can be made even when soaps are used as the emulsifying agent. These creams differ from the shave-creams in as much as they may contain greater amounts of oily or fatty substances and as aeration is not required, other emulsifiers such as the non-ionics can be employed. The real problem comes when attempting to produce creams of the opposite type. namely, W/O. Here we are faced with the fact that the propellant becomes part of the continuous phase from which it readily escapes without forming the close bubble structure found in the O/W type. The net result is that when the W/O emulsion leaves the valve, it spreads and bubbles, to leave an unsightly oily mess. If this problem has been solved, I have not seen the results.

Up to now I have been speaking of emulsions which are projected as foams and not as sprays and which employ relatively small amounts of propellants. The spraying of emulsions is a different matter. There are many good reasons why water should be included in a cosmetic quite apart from price considerations and there are many cases where it is desired to dispense a water-soluble ingredient. One can, of course, dispense water as a spray by the "three-phase system" but this method has several disadvantages. In point of fact, one of its main economic advantages, low propellant content, contributes to these disadvantages. In these systems the propellant simply forces the water through the valve orifice so that on entering the air. there is no propellant available to continue and enhance the degree of atomization. In effect, the kinetic energy is supplied by the head gas and the fineness

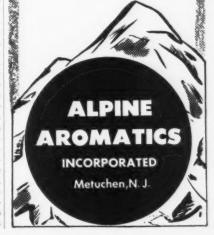
# Alpine SACHET!

LAVENDER 16

This most successful Aerosol linen and lingerie spray odor is now available in non staining form. 

Another fine product of Alpine Research.

May we sample you?



\* Chief Chemist, Polak & Schwarz, England, Ltd.

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# CONFIDENTIAL

The only Company devoted exclusively to development and research on Aerosols of the drop and the distance thrown, will depend to a large extent on the design and efficiency of the valve. It is doubtful whether a really fine and efficient spray can be obtained by this system and the "dripping" effect due to unequal particle size is well known. One step further brings us to the possibility of solubilizing the propellant in the aqueous portion. I refer here not to cosolvents such as alcohol, but to surfaceactive agents. The systems of this type, so far used, employ small amounts of propellant and operate at low pressures and once again the spray is coarse. Although many types of solubilizing agents can be used, the non-ionics are preferred.

Finally, we come to the spray emul-sions. The types which lead to the production of a mass of foam have already been discussed. If the amount of propellant is considerably increased, the contents may actually be sprayed as opposed to ejected in a mass. However, the "foam" or emulsified particles increase in size as they depart from the valve and the general effect is for the particles to fall as snow. This is because the propellant is the internal phase and it simply forms bubbles as it evaporates. We are therefore left with one possibility only if we desire to spray an emulsion and this possibility is to prepare an emulsion of the reverse type i.e. W/O. In this case, we could make the propellant our sole oil-phase and choose an emulsifier which would facilitate the uptake of water to produce a W/O emulsion. However, the oil-phase need not be only propellant, but can include, for example, kerosene or mineral oil in

If we take a mixture of mineral oil and a suitable non-ionic emulsifier, we can add water to the system to produce a W/O emulsion. This emulsion can be placed in the Aerosol container, propellant added by the pressure method, and shaken into the system. On release from the container there will be little or no foam, as the propellant is in the external phase. If there is no oil in the system, the aqueous phase will form fine particles and result in a spray. The fate of the emulsifier itself will depend upon its affinity for water and will either remain in the water particles or be projected as part of the spray. If mineral oil for instance is included in the formula, then we may anticipate that the spray itself will consist of a W/O emulsion.

These are all personal comments but whenever you want some inspired information on any aspect of Aerosols, you can always turn to the excellent Du Pont Kinetic publications. In their Technical Memorandum 21 they have discussed Aerosol emulsions at great length and from all angles. There is a general introduction to the subject of water-based Aerosol products and a discussion on emulsions in general. They list as advantages for emulsion system:

The formulation of many new products as possible.

The discharge can be regulated

from soft, space-type sprays to wet residual-type sprays.

Water-soluble products applied to the skin will not wash off readily.

Formulations can be developed without undesirable cooling when applied to the skin.

Extraction of the active ingredient into a separate propellant phase is not a factor.

Formulations can be packaged without standpipes if desired.

Their discussion is limited to W/O systems and we heartily agree with their warning that under certain conditions W/O emulsions may revert to the opposite type. Our own work is in close agreement with the suggestion of the bulletin where the emulsifiers are concerned. Non-ionic emulsifiers of the sorbitan mono laurate and alkyl ethylene oxide (low ethylene oxide content) types are specially effective.

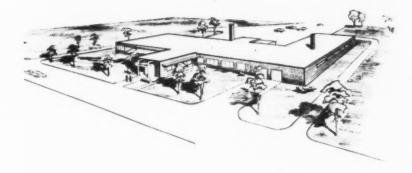
Methods of testing for emulsion type are discussed. We have found that even simpler tests can be made during an investigation by employing propellant 11 or carbon tetrachloride as the oil phase. In this way it is not necessary to work under pressure and even if the systems employed vary from the ultimate, very clear indications can be obtained. The degree of descriptive matter given in the bulletin is quite remarkable. There are four systems of fine sprays, twelve for medium sprays and thirteen for coarse sprays. Each system is described in terms of type of propellant, auxiliary solvent, composition (propellant/solvent/water) spray characteristics, separation time, pressure and flammability. Very helpful tips on the preparation of emulsions are given and special atten-tion is drawn to the effects of changes in formulation on spray characteristics. With typical Du Pont thoroughness they give details of storage stability and make suggestions for types of products which could be packed as emulsions in pressurized containers.

### Correction

We regret that a mistake was made in the last paragraph of the May Aeroscripts column. The paragraph should have read: "It really does seem that uncoated glass Aerosol bottles should not be sold."

Sign in a bank display: "Remember, part of what you earn belongs to YOU."
. . . "A man owes it to himself to be successful. Once successful he owes it to the Bureau of Internal Revenue."

A business with expenses of \$1,000 a day can run just two years and nine months on a million dollars. But with a billion — it could have started the day Christ was born and still have 800 years to run!—Executive Digest.



### HOME OF THE SEAQUIST AEROSOL VALVE

Seaquist Manufacturing Corp. announces an addition of 8,000 square feet to its home in Cary, Illinois. The factory is completely modern in every detail. Along with the new addition is a new research laboratory that will be used for customer service work, and testing of valve designs. In the same building is the modern tool room of Werner Die & Stamping Co., where molds and automatic assembly machines are engineered.



### New Aerosol Metered Valve

Emson Research has developed a metered valve that is guaranteed accurate according to a statement by the co., and is premeasured in manufacture for exact dosage—50 mg. to 3 grams, and reportedly is the only metered valve that can be pressure filled. It already has proven acceptance on glass, plastic and standard metal containers, as well as special metal containers with the valve staked in.



### One Piece Aerosol Dispensing Unit

Mist-Top, a new one piece aerosol dispensing unit which combines valve and cap has been developed by Valve Corp. of America, eliminating the need for a removable protective cover. Designed primarily for cosmetic, toiletry and pharmaceutical applications, Mist-Top may be had with conventional or metered valves.

### CSMA Holds Aerosol Orientation for Press

The ladies and gentlemen of the press were treated to an informative demonstration and display of aerosol production and versatility recently at a reception by the Aerosol Division of Chemical Specialties Manufacturers Assn. in the Park Lane Hotel, New York, N.Y. The program included a demonstration wherein aerosols of the cold fill and pressure types were filled and dispensed. An animated movie pointing out the seemingly limitless number of products that are now or soon will be packaged in aerosol form followed.



Cocktails and a product display concluded the program. The occasion marked the first step by the Aerosol Industry in its publicity and promotion campaign with the consumer press.



# Aerosol News

### Personalized Aero Mug

A new idea from Aerosol Techniques, adapts the traditional shaving mug of yesterday to today's latest pressurized lather container, with the extra attraction of individual monogramming of the user's initials. H. R. Shepherd, president of the aerosol contract packaging company, conceived the personalized mug to demonstrate the adaptability of the aerosol container.



### BASIC ANTI-PERSPIRANT INGREDIENTS



Here are three chemicals used as the active

ingredient in all types of anti-perspirant products.

CREAMS STICKS SPRAYS LOTIONS GELS POWDER



### CHLORHYDROL

(aluminum chlorhydroxide complex)

For Cream, Lotion, Powder and Spray preparations—Available in 5 forms: Granular, fine, medium, impalpable, 50% W/W solution.

- 2 CHLORHYDROL S-5
  (aluminum chlorhydroxide complex—modified)
  For Gel preparations—In solid form for alcohol
  type...grease and gum free gels.
- 3 (sodium aluminum chlorhydroxy lactate complex)
  For Cologne-Stick preparations Available as a
  40% W/W solution for making cologne sticks.

### SAFE . . . EFFECTIVE . . . EASY TO INCORPORATE

Reheis anti-perspirant chemicals offer all these advantages:

- effective anti-perspirant action
- fine deodorant qualities
- non-destructive to fabrics
- non-irritating to skin
  no buffering required

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Manufacturers of Fine Chemicals

BERKELEY HEIGHTS . NEW JERSEY



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### DETERGENTS

### ABSORPTION BASES

### FRAGRANCES

SCIENTIFICALLY DEVELOPED
 AND MANUFACTURED—
 SPECIFICALLY FOR APPLICATION
 IN COSMETIC FORMULATIONS



### "RESEDAL"

leaf green odour at its best

First class

AROMATIC CHEMICALS

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PERFUME COMPOUNDS

Our latest creation

### "CONVARIAX"

an entirely new base invaluable to produce "freshness"

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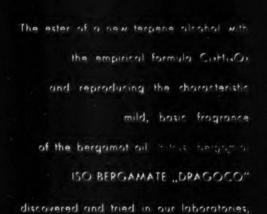
ESROLKO LTD., formerly Flora Dubendorf-Zurich Switzerland

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on possible use and samples.

Write for chemical and physical details, information on possible use and sample

# ISO-BERGAMATE A NEW AROMATIC CHEMICAL



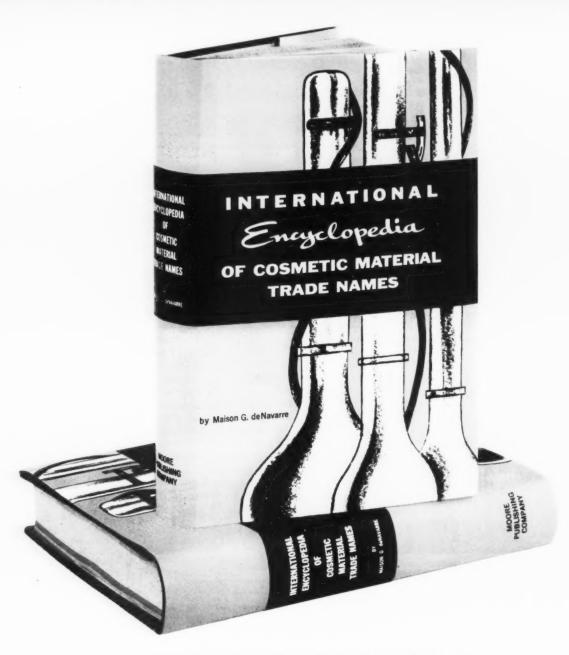
available for prompt shipment.



### DRAGOCO INC.

250, West Broadway, HEW (CRK 13, N. / Telephone (April 6, 5813-15

is now in production and



"First, let it be known that the title, as lengthy and wordy as it is, does not begin to describe the full content and function of this great reference work by the eminent deNavarre."

To be sure, the Encyclopedia presents a comprehensive, never-before-published, international listing of more than 3,000 cosmetic material trade names.

Of equal if not greater importance, it serves to identify the composition of the particular materials and in many instances also lists specific types of cosmetic items in which they are used ...plus a complete, cross-indexed classification by types and uses ...plus the full name and address of all suppliers.

Over twenty-five years ago, deNavarre saw a real need for such a technical reference book as this. That is why and when he started to compile the necessary material from all over the world. In the interim years, as the number of trade name materials grew, as new sources hered the field, the need for this type of reference volume grew apace. And over these years deNavarre religiously devoted time, effort and care in building, editing, refining and organizing his expanding storehouse of material.

Obviously, this Encyclopedia, because of its definitive content and function, because of its finger-tip reference and cross-reference features, because it does represent the answer to a long felt growing need, will serve its highly selectve users not only well but over and over again for years to come.

### IN USING COUPON TO ORDER, KINDLY PRINT!

### DESIDERATA

Maison G. deNavarre, F.A.I.C.



### **New Cream Base**

A new low molecular weight polyethylene polymer makes it possible to form cosmetic bases with melting point and ASTM penetration varying widely. Some products can be made into a heavy oil or a stiff wax. The polymer is compatible with mineral oil and a variety of animal and vegetable fats. Homogenity can be obtained without expensive and elaborate equipment. Suggested formulations use 5 per cent for light pastes and 30 per cent for stiff wax formulations.

### Tragacanth and Preservatives

While my laboratory has been investigating the interference of nonionic emulsifiers with preservatives, Eisman, Cooper and Jaconia have published a report on the effect of gum tragacanth in reducing the antibacterial properties of *p*-hydroxybenzoates, phenol, phenylmercuric acetate and a "quat." This loss in preservative properties is appreciable.

Several years ago, Higuchi told me that any macromolecule would react with the phenolic hydroxyl group forming a complex. At first I thought this a far sweeping statement. But as time passes his observation is being confirmed.

In addition, our laboratory finds that PVP, Carbopol 934 and methyl cellulose react similarly to tragacanth; although we have worked with methyl p-hydroxybenzoate only. Oddly enough, hydroxyethylcellulose (after three months) shows no such action, nor does quince seed mucilage.

So, here is some food for thought when you are working with preservatives.

### Absorption of Sulfur

There has been a lot written on the absorption (or its lack) of sulfur. Some considered the base only. Others, the form of the sulfur.

An article by Scott in the British Journal of Dermatology discusses sulfur absorption using Sas along with stable S as a carrier. Using radioautographs to establish the movement of the "tagged" sulfur, Scott finds that it takes two hours to show absorption in normal skin with complete absorption into the dermis taking place by sixteen hours; within twenty-four hours, all the S35 disappeared into the general circulation. Seborrheic and psoriatic skin were penetrated intracellularly: the Sa5 was disposed in eighteen hours by outward transfer. Acne skin behave like normal skin excepting that Sas was concentrated in the hair follicles and sebaceous glands where it remained for three weeks.

Another study on the absorption of S<sup>35</sup> was made on the skin of the rat by Neesby, Pircio and Grattan, using an S<sup>35</sup> labeled polythionate.

Some of the tagged sulfur ended up in the circulation. The data indicate that the degree of absorption is independent of the amount of polythionate applied and increased with the time of contact.

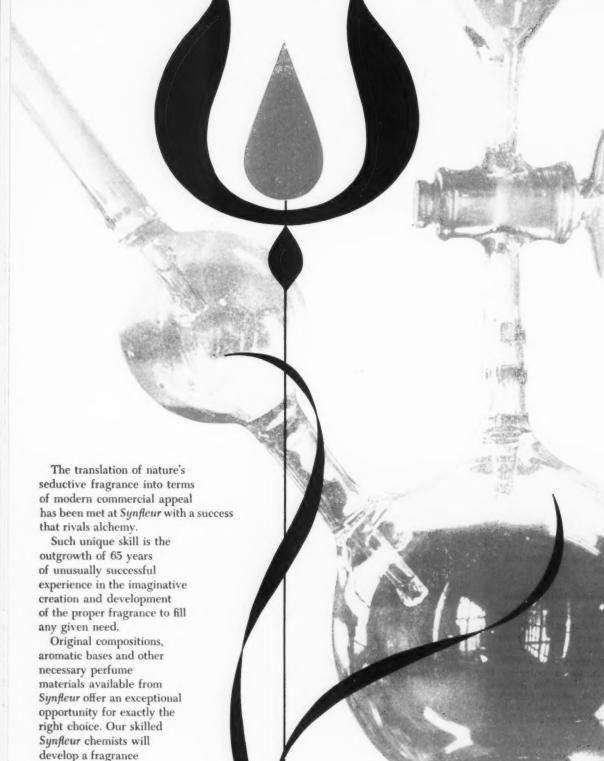
### **Another Flavor Stabilizer**

The number of companies making brominated oils for use in controlling the specific gravity of "Pop" flavor oils is now increased by one. A new supplier now offers brominated cottonseed oil for use in soft drinks.

### **Encyclopedia at Last**

Well, on June 1, the publisher began mailing pre-publication orders for the "International Encyclopedia of Cosmetic Material Trade Names." Between my Master's thesis and the above named manuscript, it was pretty rough going for a few months.

Now that it is out, hope readers will give me their "off the shoulder honest-to-goodness" opinions, comments and suggestions. Since the manuscript was closed to additions, I already have over 100 additional trade names that have come in. Keep in mind that no wide scale solicitation of names has been made. So, a book of this type is truly hard to keep "up-to-date." Anyway, send in your comments. And while on the subject, thanks to the several people



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especially suited for your purpose . . . do not hesitate to call upon them, now.

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who have already done so.

### Hypo-Allergenic Lanolin

Not that many people are allergic to lanolin, but the few that are can now use an acetylated lanolin either in its natural consistency or in the more recent liquid form. The supplier gives six references on its use or tests to determine its negative allergic activity. The acetylated liquid lanolin is soluble in alcohol. It is an excellent coupling agent. Its use in aerosols, emulsions, shampoos, nail polish removers and powdered cosmetics is just a starter for its many potential uses.

### Notes

Gelatin and cellulose dextrin are chemically broken down by Attapulgite, a clay mineral intermediate between montmorillonite and Koolinite... American suppliers please note that there are a lot of people interested in an odorless grade of oleyl oleate.... Am most anxious to learn more about "the natural water control factor of the skin"—they who can develop it will have something.

. . Don't like the gobbledegook surrounding the purchase of roll-on applicators for antiperspirants as suggested, necessary and without which one glass supplier will not supply them. . . . Maybe hexyl and heptyl p-hydroxybenzoates should be examined for antifungal activity along with lower esters. . . . It would be good to know just how "natural" vitamins and min-erals are really better than the synthetic. . . . Also I would like to see a truly scientific definition (based on fact) of the word BIOSTIMU-LIN-one gets the impression from European literature that it is a scapegoat or a play on words for nebulous and undefined physiological reactions translated from certain aspects of life in the animal and vegetable world. . . .

## Correction

The Questions and Answers department owes an apology to The Morton Manufacturing Corp., owners of the trade mark Chap Stick and to the R. T. Vanderbilt Co., owners of the trade mark Veegum for unintentionally spelling these registered trade names in small letters in the May, 1957 issue of American Perfumer and Aromatics, thus erroneously giving the impression that they were common names. We regret this error in proofreading and shall make every effort to prevent this from happening again.



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### 1243: SHAMPOO BASES

**Q.** Please send us the names and addresses of several concerns who can supply coconut oil and other shampoo bases. W. J. O., Massachusetts.

A. You can buy coconut oil shampoo bases from several companies. One is near your area, namely, Colgate-Palmolive Company, Jersey City 2, New Jersey. They supply such a coconut oil shampoo concentrate in bulk in several different types. The Davies-Young Co., Dayton 1, Ohio, also supplies a number of coconut oil soap shampoo concentrates.

### 1244: LIPSTICK

Q. We are interested in the manufacture of a good lipstick, and we find that after passing the stick through the gas flaminstead of turning into a bright or shining color it becomes lustreless. Could you tell us what is wrong and what is the cause? What do we have to do to obtain a bright lipstick after passing it through the flume? C.L.F., Spain.

A. It is entirely possible that your formula is not well balanced. If the formula is well balanced and the lipstick properly flamed, not over heated, then you should always end up with a brilliant gloss. If you would care to submit a sample of your stick and the formula along with it, we shall be glad to make further comments.

### 1245: BABY PREPARATIONS

Q. We would be much obliged if you could give us a report on the development of baby preparations during the last few years. Our interest only involves preparations corresponding to modern requirements. We would also like you to recommend some reliable and informative medical, dermatological and cosmetic literature on baby preparations. S.A.R., Denmark.

A. We do not know of any literature medical or otherwise which covers the subject of baby preparations as such. There have been a number of articles published on the use of different proprietary preparations for infants, but these give very little information as to what was used in the way of materials except possibly silicones. The silicones are used in baby preparations to prevent diaper rash. Beyond that the literature will tell you little. If you want a survey of products with recommended formulations, that of course, is another matter and would require the expense of time and the use of experienced personnel to develop such a report. We are not in a position to do this for you.

### 1246: CHEMICAL SUPPLIER

Q. Please give us sources of supply for ethyl acetate, isopropyl myristate, acetone, isopropyl palmitate, sodium hydroxide and odorless cocoa butter. What is the name and address of the company who manufactures a lotion dispenser with a semi-rubber bulb? The lotion is dispensed by pressing down on the bulb. L.C.H., Washington.

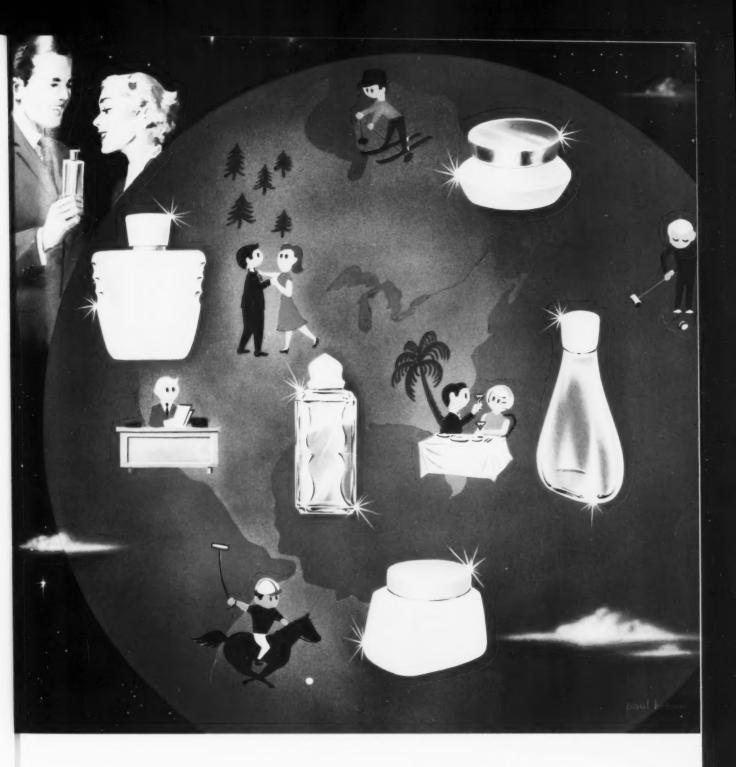
A. Any standard drug wholesale house or chemical supplier can give or sell you small amounts of solvents and sodium hydroxide. Isopropyl palmitate and myristate are obtained from the Emulsol Corp. The Kessler Chemical Company, also supplies these materials. Givaudan-Delawanna, supplies a highly refined mixture of the two under the trade name of Deltyl. The manufacturer of the semi-rubber bulb type of dispenser is the Evans-Crowder Company.

"D

## **AMERICAN AROMATICS**

- Perfume Compositions
  - Essential Oils
    - Aromatic Chemicals

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## A world of beauty is a man's right, too

The tremendous market for masculine lotions and toiletries makes male-styled containers a must. In crystal-clear flint and beautiful opal, Hazel-Atlas *Private Mold* Cosmetic Containers are imagination in glass — and practical, too. At domestic prices, they add the glamorous prestige of more expensive imports to your cosmetics. And to save you time and expense, distinctive H-A "Deco-fired" Labels and designs can be economically applied in one or several permanent colors at the time of manufacture.

Rigid quality-controls keep your H-A containers uniform in size, shape, clarity and color. They perform efficiently on the filling line and display your product at its best. You are sure of fast, dependable delivery during sales peaks and emergencies, served by H-A's nationwide network of glass plants and warehouses. A beautiful line of stock containers is also available. Call your nearest H-A representative today.





## Precisely Your Formula



THE ESSENCE OF QUALITY is intrinsic in every service when you entrust your Private Brands of cosmetics to Avon. Using precisely your formula, or developing one that is exclusively yours, our chemists deliver to you a product that meets the Avon standards of quality, a tradition for over 70 years.

Your Private Brands of cosmetics and toiletries have the advantage of uniform and simultaneous production near your best markets... East, Middle West or Canada...when you entrust them to Avon. Call or write Avon for complete information concerning the production of your Private Brands.

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## Compatibility

OF THE

TO COSMETICS

KURT J. PFEIFFER\*



It is evident that cosmetics for external use must be compatible to the skin. But this obvious condition is not always easy to fulfill when creating new preparations. Experience has shown that theoretical considerations are not enough to determine the value of a new cosmetic preparation; it often reveals its injurious effects on the skin only after being used by a large number of people. The thioglycerin dermatitis among hairdressers of various countries is an example of this.

While cases of dermatitis and eczema caused by cosmetics were still extremely scarce and considered as rarities at dermatology meetings 25 to 30 years ago, such cases are nowadays comparatively frequent and, for example, according to statistics recently communicated by A p p y , they amounted to 5.1% on 1005 examined women who suffered from skin phenomena which had to be treated in out-clinics or in hospitals.

This increase of skin irritations caused by cosmetics is not only due to the fact that cosmetic products every day find an increasing number of buyers but above all because new elements, natural as well as synthetic, are used nowadays in cosmetic preparations either in their pure form or combined with old well-tried products.

Thus it is only recently that methods have been developed in order to test the tolerance of the skin to such elements or combinations of elements. Most of these ex-

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periments are obviously made on human beings as the preparations are exclusively used by human beings.

The commonest test is the so-called *Usage test* (Gebrauchstest). A certain number of experimental persons get the preparation which is to be tested with appropriate directions for use. The places of the skin, regularly treated at intervals of 6, 12 or 24 hours, are usually controlled every 24 hours.

This way it is possible to check the compatibility of the skin not only to the various elements but also to the finished combination and also to exclude harmful elements for the skin which may appear through the stratification of finished products.

The epicutan test is also very common. It consists in putting some of the substance which is to be tested on a small piece of linen cloth and fixing (under certain circumstances air-tight) with an adhesive plaster on a suitable place on the skin, usually on the back. The result can be determined after 24 or 48 hours. If the result of the test is negative one should examine the place on the skin again after 48 and 96 hours as late reactions can occur.

As these two methods use human beings as test objects, they are naturally limited to the testing of substances whose compatibility to the skin seems probable according to casual experiences and theoretical considerations. Moreover, such a large number of substances is not often at the disposal of appropriate test persons so as to make it possible to carry out a systematic research on the various substances and classes of substances in question. Besides the components which are the vehicles of the various cosmetic preparations we find above all etheric oils and their combinations mostly used for the perfuming of cosmetic products, certain medicinal additions (such as deodorants, substances which check perspiration, agents for protection from light, disinfectants, light alkalies and acids) and finally reaction products originated from oxygen or light (e.g. from rancidification of fats).

With a view to making possible a choice among the numerous substances in question with the help of experiments on animals and to finding at the same time a criterion as exact as possible in order to estimate the cosmetic elements, the dermatologists S c h a a f and G r o s s introduced the acanthosis test. The authors relied here on the observations made on guinea pigs about the epidermis extension after applications of chrysarobin or after rubbing in yellow vaseline.

The Schaaf and Gross method proceeds as follows: One takes at least 3 guinea pigs. During 10 days and for half a minute daily, one rubs in on one flank the substance that is to be tested which has been thinned with a solvent. On the 11th day, a small piece of the treated and the untreated side is taken from each animal. On the cuttings (embedded in paraffin and dyed with hemotoxylin-eosin), the average epidermis thickness is determined by means of a 1000 X magnification by measuring about 40 times the vertical interval from the bottom of the basal layer to the inferior limit of the stratum lucidum. The epidermis thickness of the treated skin is considered as the proportional number of the thickness of the untreated epidermis of the same animal. If there is no thickening (extension?) (Verbreiterung) of the skin, i.e. if the epidermis of the treated side shows the same thickness as the untreated skin, the factor acanthosis is: 1.

Besides the thickening of the epidermis, other changes may also occur under certain circumstances after rubbing in certain substances. Intra and intercellular oedema, immigration of leukocytes and crust formation among others can be observed. But strangely enough, there is no relation between the measure of the

thickening of the epidermis and other kinds of epidermis alterations. A strong thickening of an otherwise intact epidermis or no or slight thickening besides other pronounced effects is possible.

As in any case the experiment is meant to provoke an effect of irritation on the skin, the preference will be given to a new test for determining the exact acanthosis factor. But in any case the appearance of other eventual histological changes must also be taken into account as they quite often point out the presence of undesired irritant properties, despite low acanthosis factors.

The following figures which have been taken from a work by  $S\,c\,h\,a\,a\,f$  and  $G\,r\,o\,s\,s$  show this very clearly;

		Average acanthosis factor	Other histological changes
50% caproic acid	C6H12O2	3.2	++++
50°; Capric acid	C10H20O2	3,1	
(Undecansäüre)	CnH22O2	4.3.	**++
50% laurie acid	C12H24O2	2.6.	
50% myristic acid	CuH:sO:	4.6.	_
50'; stearic acid	C18H36O2	1.4.	-
96% ethyl alcohol	C:HaO	1	
100 % isopropyl alcohol	CaH <sub>2</sub> O	1.2.	-
50'; (n-Heptylalkohol)	C7H16O	2.7.	-+++
50'; (N-Decylalkohol)	$C_{10}H_{22}O$	3.2.	+++=
10% cetylic alcohol	C16HatO	1.6.	

As seen from the figures, a solution of 50% lauric acid in ethyl alcohol which excites no reaction, leads to an average acanthosis factor of 2.6 and to very strong effects of irritation such as oedema, crust formation or separation of the horny layer. A solution of 50% myristic acid in ethyl alcohol gave even a higher acanthosis factor of 4.6 but contrary to lauric acid it did not cause any other irritation phenomena. The figures show further that the saturated fatty acids with 6-14 C atoms cause a strong epidermis thickening as well as other severe damages, apart from myristic acid, while stearic acid causes only very slight thickening without any other modification. Likewise, among the tested alcohols, only those with 7 and 10 C-atoms caused a strong thickening and severe damages while ethyl and isopropyl alcohol with 2 and 3-C-atoms or cetylic alcohol with 16 C-atoms produced no or only a slight thickening and also left the skin otherwise unaltered. These results correspond well also to practical experience with human beings.

It is now established that the new method shows a greater sensitivity so that subtler distinctions can be discovered regarding the tolerance of the skin to the widely varied elements by determining their acanthosis factor. As the foregoing results agree almost perfectly with the experiments made with human beings, it is understandable that efforts are being made in many places to undertake a systematic testing on animals of all elements used for cosmetic preparations and to determine their acanthosis factors. It should be mentioned that research similar to that made with guinea pigs has been achieved with about the same results on other species of animals. The skin of the rat seems to be particularly suited to this, according to B u t c h e r's research on the testing of elements on acanthosis reaction.

One must of course always remain aware of the limitations of such methods which are meant to value preparations destined for human beings and which depend on experiments with animals. The establishing of the acanthosis factor by experiments on animals is only a first approximation. Only the usage test and eventually the epicutan test will make it possible in the more complicated cases to make a final decision on the usefulness of a new cosmetic preparation.

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DR. KURT KULKA\*

# Aromatic Aldehydes IV

## The Duff Reaction

This reaction includes the formation of ortho formyl phenols or para dialkylamine benzaldehydes by the reaction of phenols or dialkylanilines with hexamethylenetetramine.

The reaction was first described by Duff and Bills.<sup>33</sup> The mechanism of the reaction was recently investigated by Duff and Furness, who found that in its course a bisorthohydroxy benzylamine is formed, which is dehydrogenated to the Schiff's base.<sup>34</sup> The latter compound is hydrolyzed to the aldehyde:

As will be seen from the following examples, the yields in the Duff reaction are low. However, the reaction is a convenient way to introduce a formyl group into the *ortho* position of a phenol.

### Preparation of Aromatic Aldehydes from Phenols:

Phenols are generally reacted in the presence of boric acid and anhydrous glycerine. For example:

ortho-Hydroxy benzaldehyde from phenol 150 g. of anhydrous glycerine and 35 g. of boric acid are heated to 170° C. for 30 minutes. Then 25 g. of hexamethylenetetramine are added, and the mixture cooled to 150-160° C. At this temperature, 25 g. of phenol are added, and the reaction permitted to proceed at this temperature for 15 minutes. After cooling to 110° C. the reaction mass is acidified with dilute sulfuric acid, and steam distilled, yielding 16 g. of ortho-hydroxy

benzaldehyde. In a similar way are obtained 7.5 g. of carvacrol aldehyde from 25 g. of carvarcol, and 8 g. of 2-hydroxy-1-naphthol from 25 g. naphthol.

According to Liggett and Diehl, the Duff reaction is shorter in reaction time, and gives better results than the Reimer-Tiemann reaction, and has been applied successfully where the Reimer-Tiemann reaction has failed. However, the Duff reaction is not applicable to nitrophenols, dinitrophenol, thiophenols, or 2-hydroxypyridine.

An improved general procedure, suggested by Liggett and Diehl, as is as follows:

300 g. of glycerol and 70 g. of boric acid are heated with stirring in a 2-litre beaker to  $165^{\circ}$  C. (20 minutes). The mass is cooled to  $50^{\circ}$  C. and a mixture of 50 g. of phenol and 50 g. of hexamethylenetetramine is added. The reaction mass is agitated for 20 minutes at  $150\text{-}165^{\circ}$  C., cooled to  $115^{\circ}$  C., acidified with dilute sulfuric acid, and steam distilled.

A modification of the Duff reaction is applied by Rao, Seshadri, and Thiruvengadam in the preparation of eugenol-5-aldehyde:<sup>37</sup>

10 cc. of eugenol are mixed with 75 cc. of glacial acetic acid. 40 g. of hexamethylenetatramine are added, and the mixture agitated and heated until a pale brown solution results, which is then kept in a boiling water bath for 6 hours. While still hot, the now darkened solution is treated with 50 cc. of concentrated hydrochloric acid and 100 cc. of water. After cooling, the solution is extracted with ether. To the ether extract is carefully added a 20% sodium hydroxide solution, to remove any acetic acid. Further addition of the alkali solution will give a bright yellow crystalline mass (sodium salt of eugenol-5-aldehyde). After washing with sodium hydroxide solution and ether, the salt is dissolved in water, and

<sup>\*</sup>Fritzsche Brothers Inc.

the free phenol precipitated with an acid. Yield: 3 g. From the mother liquor another 1 g, could be obtained.

## Formylation of Aryl Alkyl Amines:

Aryl alkyl amines are formulated in the para position. Following is an example of the technique applied in the

30 g. of a dialkylaniline, 40 g. of hexamethylenetetramine, and 20 cc. of 95% ethyl alcohol are heated on a steam bath, and a solution of 45 cc. of glacial acetic acid and 45 cc. of formic acid (90%) is added thus: 30 cc. are added in one portion, and the remaining 30 cc. in 10 cc. portions at 30 minute intervals. After heating for 5 hours, the reaction mass is poured into 600 cc. of 0.5 N hydrochloric acid and allowed to stand for several hours. In this way there are obtained: 14 g. of p-dimethylamino benzaldehyde, and 14 g. of p-diethylamino benzaldehyde. The reaction did not work with dimethyl ortho- and para-toluidenes.38

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## Facts on Door to Door Selling

To the American Perfumer & Aromatics

We have just had occasion to read the March issue of your publication under the heading "Ordinances Plaguing Door-to-Door Salesmen.'

We think that your handling of the subject matter was very fair indeed and we want to thank you for this exhibit of an open mind on your part in respect to our method of distribution.

While I am writing you I would like to call attention to a few of the facts stated which are not accurate as being given to you by your source of information.

I have been connected with this Association for a great many years and I don't recall any time that there were 7,000 companies in direct selling, according to our version of what constitutes direct selling. Our concept does not include retail sale of automobiles, insurance, real estate, mill machinery, etc. It does include the house-to-house sale of consumer goods almost exclusively in the household, but not necessarily so. It does not include sales contact personnel who go from house-tohouse or place-to-place.

In this type of distribution such persons are either independently operating or are in fact retailers trading on their own account in merchandise which they procure from manufacturers or distributors, the major part of whose sales are made to such persons.

The Census Department (Retail Trade) considers that a house-to-house salesperson who is a retailer trading on his own account constitutes an "establishment" and that manufacturers supplying such individuals are not counted in the retail trade figures.

You may have noted that the recent publications covering the 1954 Business Census on Retail Trade have stated that there are some 70,000 direct selling establishments and this means they have included such individuals as the Fuller Brush man, the J. R. Watkins dealer, etc., as direct selling establishments.

Prior to the depression in 1929 there were more direct selling companies or direct selling salespersons than there have ever been since. In 1948 at the time a Census of Business was taken the Census figures showed about 3,000 direct selling companies. In 1954 there were fewer than that number and currently there are hardly more than 2,500 direct selling companies.

The \$10 billion figure for direct selling is way out of line. The 1954 Census figures show total sales in direct selling of \$2,272,840,000. This represents about 1.34% of total retailing which is slightly under \$170 billion.

Allowing for lack of complete coverage by the Census Department I personally am of the opinion that total direct selling, according to our concept of what is direct selling, does not exceed \$3 billion and that it has never exceeded that amount.

You, of course, understand that total retailing in the United States has gone up in the dollar count and this can be accounted for by considerably increased prices and a considerable increase of population.

Direct selling has held its proportionate figure because of the same facts. This even figure has been held in spite of the fact that there are now fewer salespersons and fewer companies than there were in 1954 or at any previous time, except during World War II.

Considerable attention has been attracted toward direct selling in the business world because of the unusual successes of a rather small number of direct selling companies.

The larger companies are steadily getting larger and the smaller companies are steadily getting fewer.

The same trend is true in American business in areas outside of direct selling.

At my request, one of the Fairchild publications wrote a letter to the Census Department for the purpose of getting actual facts concerning the direct selling situation. A copy of their reply certainly makes interesting reading.

You may be interested in knowing that in the eleven states which held the Green River type ordinance invalid the decisions were based upon the basic law of the states involved and the state constitutions. As a consequence, the United States Supreme Court case which your article refers to did not over-rule or set aside these decisions.

There are very few Green River ordinances now being presented for adoption and still fewer which are being adopted.

Local enforcement of Green River ordinances has never been popular, even with enforcement officials.

Approximately fifteen municipalities having such ordinances have repealed them by act of the city government or by referendum to the people. In no referendum has the public voting on the question supported this type of ordinance. Just last month the nuisance type of ordinance was repealed by popular vote in Colorado Springs, Colorado. The question of a model statute for direct selling is a very difficult one.

Under the United States Constitution and repeated decisions of the United States Supreme Court licenses or fees can not lawfully be applied as a condition precedent to the right to carry on interstate transactions. Approximately 75% to 80% of all direct selling constitutes interstate transactions. You can see that it would be difficult to get any businessman or business corporation to agree to a tax law or ordinance applicable only illegally to interstate transactions.

I want again to express my appreciation of the way your publication handled the subject matter referred to in this letter.

> Yours very truly, J. M. George

President and General Counsel, National Association of Direct Selling Companies

40 July, 1957

American Perfumer

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## LANOLIN







IRVING COLBERT\*

The ever increasing interest in the uses of lanolin and lanolin products has been the source of numerous inquiries and has led to the preparation of this article.

It has been estimated that at least 50 per cent of the cosmetic items now produced annually contain, lanolin or some derivative of lanolin. The use of crude wool grease in ointments and the like dates back to ancient times. However, the availability of a purified wool grease or lanolin seems to have made its first appearance about 1882, when Braun and Lieberlich patented a method of refining crude wool grease. Since then, quite a number of processes have been developed for treating the crude wool grease, so as to yield the refined grades now available for cosmetic and pharmaceutical application.

The purified grades of lanolin as known to the cosmetic industry have only a slight odor. In spite of its greasy feel and appearance, and the continuous referral to lanolin as wool fat, lanolin is not a fat in the chemical sense. Lanolin would be more properly termed a wax, since its fatty ecids are esterified by higher molecular weight alcohols than glycerine.

Lanolin does not contain any glycerine which, by chemical definition, differentiates it from a fat. Lanolin, for the most part, is a complex mixture of complicated organic compounds known as steroid esters. These steroid esters are closely akin to the compounds exuded by the glands of our own skin—which is one of the main reasons why lanolin and its derivatives are valued so highly. The precise composition of lanolin is not fully known, but considerable work has been done to determine its various components.

The literature tells us that lanolin contains sterols as well as triterpene and aliphatic alcohols. These alcohols may be free or combined with high molecular weight fatty acids as esters. These fatty acids, which may also be free, include lanoceric, lanopalmitic, carnaubic, myristic, oleic, cerotic. The present interest in lanolin is not centered upon the fatty acid components, but rather upon the alcohols which are responsible for its unique and valuable properties, such as emulsifying action and emolliency.

By careful saponification and recovery methods, it is possible to separate the alcohols from the acids, with a yield of approximately 50 per cent wool wax alcohols and 50 per cent wool wax acids. As previously stated, the principal esters found in lanolin are those of sterols, triterpene alcohols and aliphatic alcohols.

DIHYDRIC ALCOHOLS	Normal &	
Mono- Hydric Alcohols 45%	Iso acids 25%	
	Hydroxy Acids 25%	

## LANOLIN ESTERS

The principal sterol present is cholesterol  $\rm C_2, H_{13}OH$ , which is approximately 30 per cent of the lanolin alcohol fraction. Another sterol is B— cholestanol or dihydrocholesterol, which occurs in much smaller amounts. Most of the sterols contain 27 carbon atoms with one secondary alcohol group. Some are completely saturated; others have two or three double bonds. They consist of a saturated phenanthrene ring system, having an additional five membered ring fused to it.

<sup>\*</sup>N. 1. Malmstrom & Co. Lecture before Chicago Chapter, Society of Cosmetic Chemists, February 12, 1957

Cholesterol is reported to be the principal sterol of the animal organism and is found in all cells. In all tissues, it is accompanied by a saturated derivative dihydrocholesterol. This derivative differs from cholesterol only by the absence of the double bond.

The triterpene alcohols are polycyclic compounds having 30 carbon atoms. Three terpene molecules (C10-H<sub>16</sub>), connected with the general formula C<sub>30</sub>-H<sub>45</sub>.

This fraction which comprises about 25 per cent of the lanolin alcohols is described in the older literature as "isocholesterol.'

There are at least four triterpenoid components in wool wax.

- (1.) Lanosterol (Lanostodienol C<sub>30</sub> H<sub>50</sub> O)
- (2.) Dihydrolanosterol (Lanosterol Cao Haa O)
- (3.) Agnosterol (Agnostatrienol Can Has O)
- (4.) Dihydroagnosterol (Agnostadienol Can Han O), an isomer of lanosterol

The aliphatic alcohols are composed of four series viz.: normal, hydroxy, iso and ante-iso compounds. The normal alcohols appear to range from C1.-C2:. The dihydric alcohols are a series of 1, 2-diols from C, upward with a branched chain. The iso series of branched chain alcohols have an isopropyl terminal group and those with carbon chains of 20-26 atoms have been identified. The anteiso series of alcohols have a secbutyl terminal group and an odd number of carbon atoms from C17 to C27. They are optically active as are the corresponding fatty acids. All the aliphatic alcohols recently identified are saturated.

These wool wax alcohols exist both free and in chemical combination with numerous fatty acids. Cholesterol itself exists free and uncombined in lanolin to the extent of about 1-2 per cent. However, the total cholesterol content in lanolin, which is the free and combined, runs about 15-17 per cent.

## LANOLIN ALCOHOLS

	Ali	phatics	Approx. Content %
N-alcohols		nembers	4
Iso-alcohols	5	""	6
Ante-iso alcohols	6	"	7
N-Alkan-1,2-diol	1	9.9	.5
Iso-Alkan-1,2-diol	4	9.9	3
CH	OLESTI	EROLS	
	5 n	nembers	29
180-0	HOLES	TEROLS	
	6 n	nembers	27

The fatty acids which are approximately 50 per cent of the total weight of the lanolin esters may be divided into four homologous series based on molecular structure. Our literature survey indicates that 36 fatty acids have to date been identified.

1. Normal Fatty Acids—nine members (C<sub>10</sub>-C<sub>n</sub>)

Those possessing a straight chain with an even number

of carbon atoms ranging from  $C_{10}$ - $C_{20}$ - $C_{20}$ - $C_{10}$ -Saturated 2. Hydroxy = acids- $C_{10}$ -Saturated compounds with a straight or branched carbon chain with a hydroxy group on the second carbon atom. These compounds are optically active and range from C12 to

 $C_1$ . 3. Iso acids—10 members  $(C_{10}\text{-}C_{2s})$ —Those possessing a methyl side chain in penultimate position and having on even number of carbon atoms ranging from Cur-Case 4. Anteiso acids-12 members, (Co-Ca1)-which possess

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a methyl side chain in the ante penultimate position. They have an odd number of carbon atoms ranging from C to Ca, and are optically active.

Hydrogenated lanolin consists of approximately 55 per cent long chain aliphatic material, 13 per cent polycyclic alcohols, half of which are monounsaturated and 32 per

## FATTY ACIDS ISOLATED FROM LANOLIN

Homologous Series	No. 180- lated	General Formula	No. of C atoms (odd or even)	Isolated Members of Series
1. Normal fatty acids	(9)	СН.—(СН.)—СООН	even	C10-C24
2. Hydroxyacids	(5)	CH.—(CH <sub>2</sub> )—CH—COOH OH	even	C12-C15
3. Isoacids with methyl side chain in penultimate position	(10)	CH CH (CH <sub>2</sub> ) COOH	even	C10-C28
4. Anteiso acids with Methyl side chain in Ante penultimate position	(12)	CH.—CH.—CH—(CH.)—COOH CH.	odd	CC.

Analyses of several U.S.P. lanolins reveal the following cent polycyclic hydrocarbons. range of chemical constants:

Ester number 90-110 Iodine number Hydroxyl number 30-40

To the organic chemist, data such as shown above discloses the presence of reactive groups in lanolin which can be utilized to form derivatives and, as you will see, form the basis of the newer lanolin products.

The iodine number indicates the presence of unsaturation and one usually associates with it instability. However, the lanolin double bonds, which are present in the alcohol portion of the molecule, are relatively stable. It

The high hydroxyl number in lanolin suggests a substantial content of free hydroxyl groups, not due to the free alcohols present, but rather to the hydroxyl groups in the ester molecules.

Most of the alcohols in the lanolin esters have a single hydroxyl group and are called monohydric alcohols. It is the hydroxy esters formed by the esterification of the hydroxy acids, iso acids and dihydric alcohols, those which have more than one OH group, which are responsible for the major part of the hydroxyl number of lanolin and comprise a substantial percentage of the total esters (25%).

is the presence and reactivity of these double bonds which have led to a series of interesting lanolin derivatives by means of either hydrogenation, oxidation or sulfonation.

The resulting product of hydrogenating lanolin is a snow white and odorless solid, somewhat resembling cocoa butter in appearance. Water absorption is said to be increased by 50 per cent over anhydrous lanolin and the iodine number reduced from 30 to 12. The total extinction of iodine value is stated to be impossible since cholesterol and its derivatives absorb much more iodine than is calculated, because of the secondary oxidation reactions.

The hydrogenated product does not consist of esters. During the reaction the esters are split, and the acids are reduced to the corresponding alcohols and hydrocarbons.

$$\begin{array}{c} \text{O} \\ \text{R-C-O-R'-} \xrightarrow{2\text{H}_2} \text{RCH}_2\text{-OH} + \text{R'OH} \xrightarrow{2\text{H}_2} \text{RCH}_4 + \\ \text{R'H} + 2\text{H}_2\text{O} \end{array}$$

1. Formation of an ester from acid and alcohol

O 
$$R - C - OH + R' - OH \rightarrow R - C - OR' + H_2O$$

2. Formation of hydroxy ester

O O R-C-C-OH + R' - OH 
$$\Rightarrow$$
 R-C-C - OR' + H<sub>2</sub>O OH OH

Due to the presence of the reactive hydroxyl groups in the lanolin ester molecule we have today in commercial production several of our newer cosmetic lanolin derivatives.

For example, the replacement of the hydrogen of the hydroxyl group of a hydroxy ester in tanolin with an acyl radical.

It is of interest to note that the water absorption properties of the hydroxy esters are lost as a result of this reaction. The reactant need not be limited to the acetic radical; since other acid radicals have been successfully tried.

As taken from Conrad & Motiuk, in American Perfumer, April, 1956, the comparative differences of lanolin and acetylated lanolin are shown in the following table.

	Lanolin U.S.P.	Acetylated Lanolin
Ester No.	95	110
Acid No.	Approx. 1	Approx. 1
Iodine No.	27	27
Hydroxyl No.	32	2
Water Sol Acids		
(U.S.P.)	Neutral to litmus	Neutral to litmus
Melting point		
(U.S.P.)	39°C	36°C
Specific Gravity	.935 @ 25°C	.935 @ 25°C
Color	pale yellow	pale yellow
Odor	typical	practically odorless
Mineral oil		
solubility	.5%	10%
Emulsification	W/O	None
"Feel" on skin	Tacky	Waxy

As a result of acetylating anhydrous lanolin the ester number increases, hydroxyl number decreases, mineral oil solubility increases and the well known emulsification properties of anhydrous lanolin to form stable water in oil emulsions no longer exist. Thus the dual function of anhydrous lanolin which has served as a natural emollient and emulsifier has been reduced to a single function—an emollient.

The addition of ethylene oxide linkages to the hydroxyl portion of the hydroxy esters of the lanolin molecule results in the formation of ether linkages.

Mineral oil	insol.	
Corn oil	insol.	Promotor

This is an entirely new form of lanolin, completely soluble in water, yet possessing emollient properties similar to those of normal lanolin and available as a transparent golden free flowing viscous liquid containing 50 per cent active material, or as an anhydrous golden non tacky solid. It produces solutions in water which have slight foaming properties, and are useful for wetting and emulsification. It is a nonionic surface active agent, stable to acids, alkalies, and electrolytes.

Thus it is possible to utilize the well known properties of lanolin in a water solution form as distinct from the normal water in oil emulsion form.

Some possible uses include:

1.) O/W emulsifier.

2.) Solubilizer for perfumes, essential oils.

3.) Emollient without stickiness.

Hair conditioner—aerosols—due to its alcohol solubility.

Superfatting agent in soaps without loss of foaming action.

Twenty years ago wool wax alcohols were relatively unknown, or rather an uninvestigated product except in Germany, where their production had been under way for many years. They were never widely used outside that country. But today, there are modern plants outside of Germany in continuous production of wool wax alcohols.

This reaction changes water insoluble lanclin to a water and alcohol soluble lanclin derivative, from a foam depressant to a foam enhancer.

	Lanolin	Ethoxylan
Saponification No.	85-105	16-20
Hydroxy No.	32	25-40
Iodine No.	18-36	8-12
Specific Gravity	.935	1.05 - 1.07

SOLUBILITY OF ETHOXYLANS (Grams per cent.)

	Ethoxylan 100	Ethoxylan 50
Water	Complete	Complete
Anhydrous Ethyl alcohol	3	_
95% Ethyl alcohol	3	6
50% Ethyl alcohol	Complete	Complete
25% Ethyl alcohol	Complete	Complete
Methanol	i	_
99.5% Isopropyl alcohol	15	25
25% Isopropyl alcohol	Complete	Complete
Acetone	$\hat{4}$	
Ethyl Acetate	15	
Ethylene glycol	50	-
Toluene	25	-
Hexane	insol.	-

Saponification of an ester—Wool Wax

$$\begin{array}{c} \text{R-C-C-O-R'} + \text{NoOH} \Rightarrow \text{R-C-C-O Na} + \text{R' OH} \\ \text{Saponifiable} & \text{Unsaponifiable} \\ \text{OH} \end{array}$$

It is the above reaction which is responsible for the production of the wool wax alcohols and wool wax acids. The uses of wool wax alcohols fall under four main heads:

1. As a Wax, because of the similarity to waxes.

2. As Alcohols—because of their aliphatic alcohol content (e.g. sulphonated alcohols).

3. As Sterols—because of their sterol content, especially as crude cholesterol (e.g. in the manufacture of cholesterol derivatives, etc.).

4. As an Emulsifying Agent—owing to the strong tendency to produce W/O emulsions (e.g. in ointment bases).

## COMMERCIAL LANOLIN PRODUCTS

A. Lanolin Esters-

1.) U.S.P. Lanolin anhydrous-

2.) Liquid Lanolin-Lantrol.

The lower molecular weight mineral oil soluble liquid

esters of lanolin prepared by fractional solvent crystallization.

3.) LANFRAX

The higher molecular weight waxy esters of lanolin after removal of liquid esters.

4.) Anhydrous lanolin colloidally suspended in liquid lanolin derivative esters

- 5.) Isopropyl esters of lanolin fatty acids prepared by partial transesterification of lanolin with isopropyl alcohol.
- B. Lanolin Alcohols-or Wool Wax Alcohols.
- C. Substituted alkyl amines of lanolin fatty acids.
- D. Acetylated lanolins-

E. Ethexylated lanolins

- 1. Ethylene oxide treated lanolin to develop hydrophyllic properties.
- 2. Polyethylene sorbitol lanolin derivatives.

F. Absorption Bases

One of the most important properties of lanolin and its concentrates is its excellent emulsifying power. Lanolin itself is a self emulsifying agent capable of forming stable emulsions with water, which are compatible with many drug and cosmetic ingredients.

The requirement of most skin creams is that they should possess emollient properties to some degree. To attain this, lanolin usually entered into their composition in varying degrees. With the advancement of cosmetic emulsion technology towards more elegant looking and more stable emulsions, more and more products today are centered about combinations of modified lanolin products, or what may be generally known as absorption bases; to attain stability, texture and better emulsions. The role of the modern absorption base seems now to include two functions:

- 1.) To provide a neutral, odorless, pale base containing a mixture of emulsifying agents and capable of holding as a stable W/O emulsion large quantities of water or aqueous solutions of a wide variety of
- 2.) As a substitute for or alternative to cholesterol and wool wax as agents capable of imparting emollient properties to certain types of cosmetics which normally would not possess such desired and important properties.

The first absorption bases used were mixtures of lanolin and petrolatum. The industry has progressed so that today the modern absorption bases make use of certain purified fractions of wool wax in combination with the latest technological advancements of products from other industries. These materials are compatible with most drugs and have remarkable properties of absorbing lots and lots of water. For example, a product such as NIMCO Nimlesterol will absorb as high as 2000% its own weight of water in an W/O emulsion, Quite a number of absorption bases are available under various trade names.

The principal problem with water in oil emulsions is attaining stability. Apparently the inclusion of an absorption base or its equivalent in the formula reduces the difficulty to form such an emulsion and simultaneously enhances its stability. The principal merit of these water in oil emulsion products, which has not been recognized as widely as deserved, lies in their close affinity to the skin and their ability to hold water rather than repel it.

The absorption base type creams and lotions, widely used by the pharmaceutical industry for many years. point to cosmetic opportunities as yet unexplored. No water in oil emulsions exceed the brilliance, whiteness and texture of a well made absorption base product. However, emphasis must always be placed upon care in manufacture and formulation.

The following is a list of the main current applications of lanolin or its derivatives in cosmetics:

- 1. After depilatory creams-Lanolin counteracts the irritation to the skin often produced by these creams.
- 2. Anti perspirant and deodorant creams-Emollient, counteracts irritations.
- 3. Astringent and cleansing creams-Replaces the natural fats and oils lost by solvent action.
- 4. Pressed powder-Increases the adhesiveness and adds emollience.
- 5. Cold creams-The oldest known cosmetic which is still the most popular.
- 6. Eye shadows and mascara-Helps soothe the cutaneous irritations which sometimes result from use of cosmetics.
- 7. Face masks and packs-Facilitate removal of blackheads by its softening action on skin.
- 8. Hair preparations-Conditioners, shampoos, waving lotions, hair tonics, hair rinses.
- 9. Hand creams and lotions-As a source of emollience and skin softening agent.
- 10. Lipsticks-Improves adhesiveness of the film in addition to imparting emollience and counteracting the drying effect of the indelible type sticks.
- 11. Nail polish removers—Replaces the natural oils generally stripped by the solvents.
- 12. Shaving creams-Enhances the emollience and soothes the skin following the harshness of soap and detergents.
- 13. Skin Creams and lotions-As an emollient and healing agent for chapped hands.
- 14. Soaps-Superfatting agent.

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## A Better Way... A Simpler Solution

Folk-lore, fables and fiction are all full of stories of men who sought the world over for some treasure, who devoted their lives to the pursuit of a "golden fleece" or to a crusade for some noble or scientific purpose.

Some of those stories wind up with the heroes finding the object of their search at home, right in their own back yard. Dr. Russell Conwell, founder of Temple University, was famous for his "Acres of Diamonds" sermon, the diamonds being riches to be found where you are instead of wandering over the world.

Each industrial plant has men whose job it is to search constantly for "golden fleece"-materials better than they are now using, methods superior to timehonored tradition. The quest of those men crosses the paths of those who follow approved methods and who use the proven, reluctant to try the new or the unusual.

Look around your company, or your department. You will see both types of men-one dealing with tomorrow, the other having the production responsibility of today with little time to look over his fences .- Aaron Carpen-

## **Aesthetic Packaging**

A quality product deserves a quality design. Are you aware of the gamble that every company takes in introducing a new product? These new products are the lifeblood of any progressive company, but did you realize that the Department of Commerce estimates that 80 per cent of all new products fail? Thirty-one per cent of product failures are attributed to the product and or the type of package or package design. This was the highest percentage of any single factor that caused these failures. . . .

We, as package designers, realize that the package is perhaps the most valuable advertisement which a company has. It is the advertisement that is closest to the consumer—at the point of sale. It is the last advertisement the consumer sees before she makes her selection among brands; considerations of unusual or off-beat design. Of course appearance is important, but the primary function of the package designer should be that of a production and merchandising engineer consultant. The designer must get his hands dirty. He must know and understand the product from the raw material to the retail shelf."—Harry Lapow in Advertising Agency Magazine.

## **Keys to Packaging That Sells**

A coordinated design program is the face which a company reveals to the public. How do we create a "corporate image" so dynamic that it will speak for the quality and prestige of the company and product? The key element is the package—and here are four markettested principles for making your packages do their job:

1) Believability: the package should be logical and reasonable. It must look like what it is. 2) Dominance: the package must stand out in a crowd. 3) Simplicity and flexibility: take into account the facts that a shopper cannot stop to decipher complicated messages, and that a dealer has shelf and stacking problems. 4) Vivid imagery: the package must have memory value, so that the shopper recalls it instantaneously on sight.—Walter Lippincott and Gordon Margulies in Executives Digest.

## **Avoiding Pitfalls**

Avoid the pitfall of adopting the advertising strategy of a competitor of yours simply because his particular brand of strategy happened to work. Remember that his advertising objectives, and his problems and his advertising budget may be, as they frequently are, radically different from yours.

Your advertising agency or your national association will help you determine how best to allocate your advertising funds if you will take the trouble of acquainting them fully and honestly with your sales objectives and your sales problems.

"Assuming that you have decided to use either radio or television, or perhaps a combination of both, you are next confronted with the problem of what to buy, which is another way of saying, 'how to use the media most effectively.' Should you buy announcements or should you buy programs, either as a full sponsor or perhaps as a participating or alternate sponsor? Here again you will have to determine what your primary advertising goals are. For example, if you are trying to establish the prestige of your dealership in your community, it

## How to Avoid

A master chart for avoiding eight most common, most treacherous pitfalls in marketing new products

WILLIAM M. BORTON, Ph.D.

The failure rate for new products—80% to 98%—proves that the path is strewn with traps, any one of which can be fatal.

This master chart was prepared to help executives identify the dangers and to decide what kinds of research, and how much, should be done to avoid them. Since it is generalized and simplified for over-all planning, the chart must be adapted somewhat to the individual situation. Also, it omits extended checklists of considerations and details of research procedures which should be familiar to persons who are to do the work. Do-it-yourself research can be far more expensive than having an expert assist on it, but the chart may furnish some ideas for steps a businessman decides to carry out by himself.

Since the new product has been identified, it is assumed that 5 booby traps have already been avoided by well-based decisions about: (1) the company's interest in new products; (2) what kind; (3) who is responsible for obtaining, screening, and developing ideas; (4) where to look for ideas; (5) the tentative selection of one of them.

It is also assumed that: (1) the product is new, permitting less effective use of past experience and comparisons than when marketing a redesign of an established product; and (2) some information has already been obtained from the trade, potential users and such other sources as business-publication and trade-association personnel, articles and government reports.

Other traps that lie ahead, minimum measures for avoiding them and additional steps for standard avoidance, are listed in the chart. The entire project should be revaluated periodically, in light of current information.

\*University of California, Los Angeles, Reprinted from Printers' Ink, May 3, 1957. Capyright 1957 by Printers' Ink Publishing Ce. Inc., 205 E. 42nd St., New York 17, N. Y.

might be to your advantage to sponsor, on a full or partial basis, one of the many popular local programs in your community. If, on the other hand, you are primarily interested in reaching as many prospective customers as possible, you may wish to purchase announcements at different times of the day and on different days of the week. Most radio and television stations have recognized the importance of scheduling an advertiser's spots widely and have established so called 'package plans' which make it easy and extremely economical for you to buy a sufficient number of announcements to thoroughly saturate your prospective market.'—Jack Reber in Advertising Agency Magazine.

## New Product Booby Traps

Trap	Steps for "minimum" avoidance	Additional steps for "standard" avoidance
that prospective buyers, especially of a different occupational or social class, will see the product	A. Classify good prospects, based on current information. Classify kinds of persons who responded to preliminary announcements.     B. Interview some of them. Present the product or proposition as realistically as possible (picture better than description, model better than picture, sample better than model, etc.). Note questions, objections, suggestions, degree of interest.	A-1. Expose product to groups containing probable prospects (via exhibits, magazine advertisements or announcements, direct mail, survey); learn characteristics of persons who respond. Define precisely what the product does; consider what persons are likely to most want this done.  B-1. Interview adequate samples of each prospect class. Obtain additional classification information (age, income, industry, size, location, etc.). Measure attitudes more objectively, use depth techniques.
2. The "At-last-we-have-an-adequate-design" trap: stopping research and development as soon as the design or formula appears to do the job for which it was intended; failing to anticipate various field conditions; failing to take advantage of first choice of designs, sizes, celers, names, etc.	A. Let prospects use samples under various conditions.  Observe performance and limitations of product; reactions, objections and suggestions of users; degree of interest. Note additional uses, new sales points, demonstration ideas. Get testimonials.  B. Look at product as if competitor had introduced it. (How could you make it more acceptable? Cash in on its missionary work? Produce it more cheaply? Does it need all its features? Can standard parts be used? Can all or part be produced more cheaply on contract?)	A-1. Place more samples, under more kinds of conditions. Observe usage more closely; make time-and-motion and detailed cost studies. Make detailed comparisons with principal alternates. Measure attitudes after period of use.      B-1. Retain independent designer and process engineer to analyze as a competitor. Have independent marketing consultant view product as a competitor.      B-2. Conduct research on acceptability of name, package, label. If design is modified, repeat research.
The "All-of-them-will-buy-one" trap: failing to recognize that the effective potential in each market class is limited to prospects who meet all these (and other) requirements—have enough need for the product, don't already have something adequate, like the product well enough to pay the price, can afford it, have a place for it.	A. Refine the definition of best classes of prospects from information already obtained.  B. Interview a number of each class and obtain indication as to what proportion will buy. (Voluntary effort to buy superior to willingness to place order; willingness to place order superior to statement of intention to buy; statement of intention superior to statement of favor.) For interested persons, determine reasons, questions, objections.	A-1. From time and cost studies, calculate size or other point above which purchase results in savings.      B-1. Interview larger samples or more classes, selected more carefully. Give more consideration to amount of information possessed, in relation to desire to buy. Obtain more detailed information about attitudes, characteristics and situations.      B-2. Make separate tests on several prices.
<ol> <li>The "Selling-it-is-somebody-else's-job" trap: ne- glecting or underestimating the educational and sell- ing job necessary, and the selection of the most effective channel of distribution.</li> </ol>	A. List the main information which must be conveyed to ultimate prespects.     Consider which channels of distribution and kinds of middlemen will best provide the amount and kind of display and selling necessary for ultimate prospects. Interview some of each kind of middleman in the channels considered. Learn margins desired.     C. Estimate amount of necessary initial missionary and sales training effort by company salesmen and executives. Plan number and kind of regular salesmen needed. Estimate costs.     D. Estimate costs of necessary advertising and literature.	A-1. Prepare first draft of manual for selling to ultimate prospects (covering best kinds of prospects, who to see, qualifying prospects, etc.).  B-1. List all possible channels handling similar products or products which require similar sales effort, or which reach the same kinds of prospects Obtain operating ratio for all middlemen in these channels.  C-1. Determine introductory and regular sales cos experience for comparable products.  D-1. Confer with advertising agency. Determine introductory and regular advertising cost ratios fo comparable products.
<ol> <li>The "The-Lord-will-provide" trap: proceeding with- out complete budget estimates.</li> </ol>	A. Prepare and maintain budget based on best current estimates of unit sales, selling price, selling costs including executive time, production costs and overhead. What is effect of production of this product on cost of other products? What is effect of sales and executive effort devoted to this product on sales and profits of other products?  B. Total the estimated investment (including machinery, materials, inventory, losses sustained before product becomes profitable). Is this capital available?	A-1. Construct budgets based on favorable and un favorable assumptions, and for several time periods. Break items into further detail and checagainst relevant experience.  A-2. Separately, for each person involved in the distribution of the product, consider whether the probable payoff justifies switching time and effor from other products.  B-1. What is the estimated return on investment? It is better than alternate investments?
6. The "Stay-away-from-legal-matters" trap: not pre- paring to conform to legal requirements, avoid li- abilities or protect rights.	A. Have legal counsel select and check more significant legal considerations.	A-1. Have legal counsel make detailed check of a legal considerations.
7. The "We-can't-wait" trap: failing to work out adequate distribution policies and selling and advertising plans, and testing them, before general introduction of the product.	A. After preparation of advertising, publicity, training and introduction plans, preliminary sales potential and quota figures, and policies relating to territory allocation, dealer protection, discounts, etc., discuss all of them with representative middlemen.  B. During actual introduction, carefully observe operations by several kinds of middlemen. Record sales calls, displays, sales, repeat orders, objections, best kinds of customers, reasons, methods. Use information to revise plans, policies, quotas.	A-1. Discuss plans with some of each kind of en ployee of each kind of middleman who will be involved in the distribution of the product. Not comments. Prepare policy and sales manual.  B-1. Conduct sales test. Offer in one or several representative, closely observable markets. Try varitions of advertising and sales methods. Reconconditions and results by relevant variables (classifications) of results by relevant variables (classifications) of the product. Use findings to pature was spots and improve methods for gener marketing of the product.

- 8. The "Ship-them-and-forget-them" trap: failing to take full advantage of actual marketing experience to improve the program.

  A. After general introduction, select successful and unsuccessful areas, salesmen and dealers; compare methods used, note differences.
- A-1. Compare sales with suitable market index. Observe and interview employees of successful and unsuc-cessful dealers, compare methods and conditions.



## Investigation of an Impurity in

## Commercial Isobornyl Acetate

A new dicyclic ester has been isolated as a byproduct in the manufacture of commercial isobornyl acetate. The ester is the result of a hitherto unreported rearrangement of camphene.

The ester has an odor entirely different from that of isobornyl acetate, and the small amount of it usually found in commercial isobornyl acetate may affect the odor quality of the latter.

Physical properties and infrared spectrograms of the ester and its derivatives are given as an aid to the detection, estimation and identification of this material.

Commercial isobornyl acetate is produced by heating together camphene, acetic acid, and a small amount of sulfuric acid or other strong acid as catalyst. The addition of the acetic acid to camphene is accompanied by a rearrangement of the camphene skeleton:

CAMPHENE

ISOBORNYL ACETATE

If, however, the technical product is carefully fractionated, there will usually be found at the high boiling end, a concentrate of another ester which does not have the characteristic pine-needle odor of isobornyl acetate. By careful refractionation this ester, which is here called pseudo bornyl acetate, can be recovered in pure form and shows the following properties:

Boiling Point	105°C. (10 mm)
$N_D^{25}$	1.463
$d\frac{25}{15}$	.981.

The boiling point of isobornyl acetate is  $97.5^{\circ}$  at 10~mm.

Whereas isobornyl acetate dissociates to camphene and acetic acid if distilled at atmospheric pressure, pseudo bornyl acetate distills without evident decomposition at

\* Contribution of the Glidden Co., Southern Chemical Div., Jacksonville, Fla. Mr. Booth's present address is Union Carbide P.O. Box 1674, Houston, 1, Texas

 $238^{\circ}$ . When heated with an acid clay, however, it decomposes at about  $160^{\circ}$  to regenerate camphene and acetic acid, thus reversing its formation.

The molar refraction of pseudo bornyl acetate, calculated from its physical properties, is 55.1 and agrees well with the theoretical 54.8 for CH<sub>3</sub>COOC<sub>10</sub>H<sub>17</sub>, no double bond, allowing a slight exaltation for the bicyclic system

Saponification of the ester yields a crystalline alcohol, pseudo borneol, which when purified by centrifuging melts at 47° and does not decolorize permanganate solution. The ester saponifies relatively slowly, resembling the bornyl esters in this way.

When oxidized with Beckman's chronic acid mixture, pseudo borneol is converted to a ketone, pseudo camphor, which when purified by centrifuging melts at 68°. The semicarbazone melts at 210°, and is readily hydrolyzed back to the ketone by dilute sulfuric acid. The semi-carbazone is formed readily as with camphor, rather than slowly as with fenchone, thus indicating that the carbonyl group is not badly hindered. As shown by the infrared spectrogram, the wavelength of the keto absorption at 5.77  $\mu$  demonstrates that the keto group is part of a five membered ring. The Beckmann, oxidation of pseudo borneol to the ketone, pseudo camphor, demonstrates that pseudo borneol is a secondary alcohol, and this is borne out by the infrared spectrum.

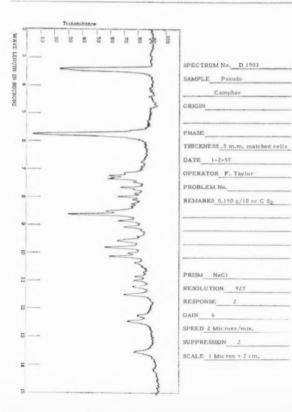
Pseudo bornyl acetate is slowly converted to isobornyl acetate if warmed with acetic acid containing a little sulfuric acid catalyst. The conversion is about half complete in 24 hours at  $70^{\circ}$ .

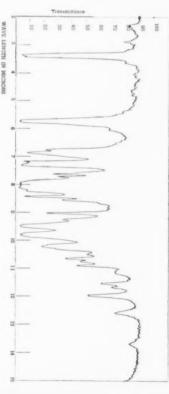
The above evidence indicates quite conclusively that camphene undergoes a reversible acid catalyzed rearrangement of a previously unreported type.

Infrared spectra of pseudo bornyl acetate, pseudo borneol, pseudo camphor and commercial isobornyl acetate are shown in the accompanying figures.











SPECTRUM No. D 1905



LANOLIN CHOLESTEROLS in their most active form.

The Amerchols are non-ionic, natural EMULSIFIERS, PENETRANTS and EMOL-LIENTS made from pure lanolin. They will help you achieve superior cosmetic and pharmaceutical formulations by markedly improving stability, texture, appearance and effectiveness.

An Amerchol such as multi-sterol, liquid Amerchol 101 enhances softening, penetrating and spreading activity while holding desirable moisture to the skin. The surface active Amerchols function at the interface in oil-in-water emulsions to bring about these unique effects on skin and hair.

The Amerchols are ideal, stable ointment bases which induce rapid drug release, and promote optimum healing rates.

WE KNOW OF NO CASE OF AN ALLERGY DUE TO AN AMERCHOL.



American Cholesterol Products

AMERCHOL PARK EDISON, NEW JERSEY,

Write on your business letterhead for technical literature and suggested formulas.

## Aerosol Spray Patterns

Apparatus and procedure for measuring particle size of aerosols

MORRIS J. ROOT\*

Although several methods have been described in the literature for measuring particle size of aerosols, these methods are tedious, time-consuming, require elaborate equipment, or are difficult to carry out. The method herein described is a simple and quick technique for obtaining qualitative comparison of spray patterns. Furthermore, the equipment required can be put together for about \$150.

The method is based on the impingement of the spray on a piece of paper that has been treated with a dyetalc mixture. A 5% mixture of the dye in talc is brushed onto a 60-pound Vellum paper stock. A small, but known, burst of spray is allowed to impinge upon the treated paper. Wherever the particles strike the paper the dye goes into solution and is absorbed. The size of the dye spots are in direct relation to the size of the liquid particles when they come into contact with the paper. The dye used must be soluble in the spray particles. In the case of alcoholic sprays such as hair lacquers, a water-soluble dye such as DuPont Crystal Violet must be used; in the case of oil soluble sprays such as insecticides, an oil soluble dye for example, DuPont Oil Red Powder, must be used.

The apparatus is made up from the following:

- General Electric A-C motor type SKH, Frame 48, 1.6 HP, 1725 RPM, 60 cycle, 115 volts, or equivalent.
- Variable speed "Zero Max" torque converter, Model 142X, Revco Inc.
- One-inch diameter by 4 in. long connecting rod from torque converter to disc.
- Rotating Disc made from 1 16 in. thickness aluminum or stainless steel, 534" radius; cut-out radial sector, 14 cm. at circumference; 15-cm. sliding shutter.
- 5. Mounting Board.
- 6. Slot on disc to accept 5 x 5 in. piece of paper.

In order to know the exact amount of material which is sprayed from the container, it is necessary to know the rate of rotation of the disc, the dimensions of the cut-out sector, and the delivery rate of the valve. The sector must be pie shaped, i.e., the edges must follow the radii of the disc. Using the equation below, it is then possible to calculate exactly how many grams are sprayed through the disc.

<sup>\*</sup> Technical Director, G. Barr & Co.



Aerosol spray pattern apparatus in operation.

 $\frac{SD}{2\pi rR} = Grams$ 

S - Slit width at circumference in cm.

D - Delivery rate of valve in grams per seconds.

R — Rate of revolution of disc in revolutions per second.

r - radius of disc in centimeters (14.5 cm.)

The disc must revolve slowly enough so that it is possible to depress and release the aerosol valve before the slot in the disc has made a second revolution in front of the spray. A small slit width and high rate of revolution permit only a small amount of spray to pass, while a large slit width and slow rate of revolution permit a large amount of spray to pass.

Patterns made from aerosols containing only fast drying solvents can be kept indefinitely and serve as a permanent record, whereas patterns made from aerosols containing oils or solvents which dry slowly change with time and must be photographed for a permanent record. The slow or non-drying oil with dissolved dye gradually spreads in the paper, thereby distorting the pattern obtained.

This spray pattern technique is particularly useful for comparing spray characteristics obtained with different valves, actuators and formulations. The method is rapid, easily done, and can be visually evaluated.

## 1957 Glycerine Awards

The Glycerine Producers' Assn. is now seeking 1957 Glycerine Research Award nominations for outstanding research involving glycerine. First award is an honor plaque and \$1,000; second award, honor certificate and \$300; and the third award, honor certificate and \$200.

The work may concern itself with the chemical, physical, or physiological properties of glycerine, or with properties of glycerine-containing or glycerine-derived materials. It may deal with applications which of themselves are currently of value to industry or the general public or it may deal with scientific principles or procedures likely to stimulate future applications. Originality in extending the usefulness of glycerine into new fields will receive special consideration.

Nominations for this year's awards must be received by November 1, 1957. Entry blanks, as well as complete information on the awards, can be obtained by writing to the Awards Committee, Glycerine Producers Assn., 295 Madison Avenue, New York 17, New York.



The MODIFIED LANOLIN with new properties.

Modulan is the acetyl derivation of pure lanolin containing all the constituents of lanolin, modified by a unique treatment to impart NEW and VALUABLE PROPERTIES. (U. S. Patent No. 2.725.334)

Modulan forms clear solutions even in cold mineral oil and deposits hydrophobic, emollient films on skin and hair. These desirable protective films are waxy rather than tacky and are very pleasant to the touch.

Modulan is extremely hydrophobic—does not form greasy emulsions and is practically odorless. Because of its outstanding stability and compatibility with oil-in-water emulsions and with soaps and shampoos. Modulan is particularly recommended for use in creams, lotions, baby products, hair preparations, make-up, and ointments.

CLINICAL INVESTIGATIONS HAVE INDICATED THAT MODULAN IS HYPO-ALLERGENIC.



American Cholesterol Products

AMERCHOL PARK EDISON, NEW JERSEY

ACETULAN—a new chemica!

design for cosmetics.



## **PRODUCTS & IDEAS**

### ELECTRONIC CHECKWEIGHER-1

Triner Scale and Mfg. Co. recently added to its standard line a new large-capacity Electronic Checkweigher, designed specifically for conveyor line use to determine short weight. According to the manufacturer the Checkweigher will indicate correct or short weight with an accuracy of better than one part in 1000. within one half second after the load is fully applied. The required weight setting is made by tamperproof control panel adjustment. All required settings within a range from 1 4 to the full capacity of the scale can be made by setting the dials on the control panel and no internal adjustment of the scale mechanism is required. A green light indicates correct weight, and a red light and a chime can be set up to indicate either underweight or overweight. It is available in standard capacities of 50 or 100 pounds.

## MOLECULAR STILL-2

Development of a two-inch version of the Arthur F. Smith Co.'s Rota-Film Still has been announced. The new model offers a

relatively inexpensive method of molecular distillation for users who do not require the capacity of full size models. The two-inch laboratory model, constructed completely of glass with the exception of Teflon wiper blades, stainless steel rotor and metal top plate, is capable of handling batches from 10 ml, to 20 liters. The vacuum range is from atmospheric to 1 micron Hg., and the temperature range is to 450 degrees C. Temperature, product flow, and rotor speed all may be easily regulated, and several units may be coupled for fractionation.

### **TEFLON EXPANSION JOINT**

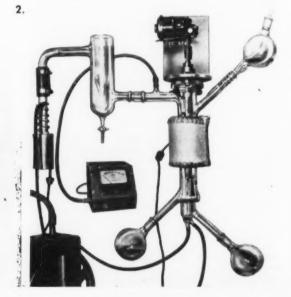
A full line of Teflon expansion joints and couplings with field replaceable Teflon bellows for glass, stainless steel, and glass lined pipe has been announced by the Chicago Gasket Co. According to the manufacturer these represent the first practical design with a replaceable bellows on this type of product. Called "Teflex" these bellows utilize the well-known heat and chemical resistant qualities of Teflon. They

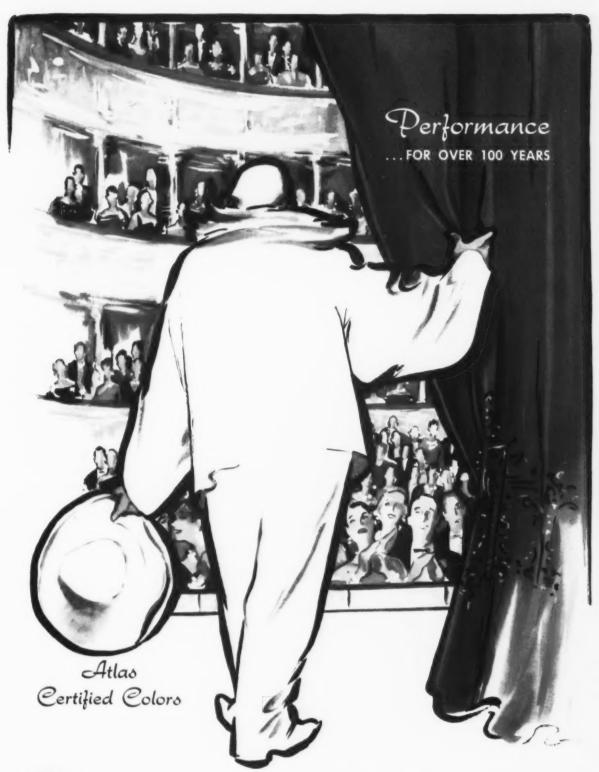
will not impart any taste, odor, color or other contaminations even when used under high temperatures. They are recommended for use where vibration, misalignment and temperature differentials exist. They are rated at 50 psi at 70 degrees F, 34 psi at 150 degrees F, 25 psi at 200 degrees F, and can be used at lower pressures at temperatures up to 250 degrees F. Both the bellows and expansion ioint assemblies are available for all sizes of pipe up to 6" diameter, with special size bellows also supplied.

### PLASTIC LABELS

Goodstix Identifiers are continuous rolls of brilliantly printed, transparent, self-sticking plastic labels. Because the printing is done in reverse, on the adhesive side, the labels will reportedly withstand rough handling without marring. Eliminating the problem of handpeeling, the continuous rolls may be used with semi-automatic dispensers, or dispensed automatically for assembly-line applications.









FIRST PRODUCERS OF CERTIFIED COLORS

## H. KOHNSTAMM & COMPANY Inc.

ESTABLISHED 1851

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## **Book Reviews**

INTERNATIONAL ENCYCLOPE-DIA OF COSMETIC MATERIAL TRADE NAMES. Maison G. de Navarre. 7x9 in., 369 pages, cloth covers. Moore Publishing Co., 1957. Price \$7.50.

A review of this type of book is not easy. Its purpose as implied by the title, is to give a pretty complete listing and discussion of materials used in cosmetic practice. Note that this does not include perfume specialties or consumer merchandise.

A complete listing means all the materials of the world-that is a large order. So let us see how well the author keeps his promise.

A quick glance through the material indicates a number of easy things to spot. First, there is a lot of international material; second, there are duplicate uses of the same name by different companies for different materials; third, anyone interested in cosmetic trade names, whether to register a new one, or to check composition, will find this book invaluable.

Among the materials listed note the variety of countries represented from a sample checking: Abesco (British), Cannawax (Canada), Cellofas (British), Davolene (U.S.), Emuline (Holland), Frigen (German), Gynodermin (German), Happo-Zai (Japan), Kollest (U.S.), Lanocerina (Italian), Mucilagene (Swiss), Nymcell (Holland), Oxysebacol (France) Proctin (Denmark), Prodhyseptine (France), Querton (Sweden), Safacid (Norway), TO-55 (Swiss), Thiofaco (Belgium), (Belgium), Ubecire Vitabiosol (Italy), Berol (Sweden), Bomopin (Swiss), Butex (British), Butyrum Tego (German), Brillantoline (French), B-32 (German), Base ML (U.S.) and one could go on. Additional entries are from several other countries, anything this side of either the iron or bamboo curtains.

The descriptions are adequate. In the preface, the author indicates that this encyclopedia gives a thumbnail sketch of each material; further data can be easily obtained from the supplier.

Suppliers' names are indicated in one section

An interesting addition is the

classification of various types and uses for materials, listing trade names which refer to the general text. Such classifications include higher alcohols, astringents, sun screens, emulsifiers w/o and o/w, solvents, plasticizers, polyglycols, sodium alkyl sulfates and many others.

It is unlikely that any book could be a complete listing of all cosmetic materials, since new ones are being introduced daily and many old timers are not commonly known. However, the present work seems to have a fairly thorough worldwide coverage of cosmetic materials. It is the only comprehensive work to date that is international in scope.

Chemists, suppliers, buyers, trade mark lawyers and libraries will all need this book.

"Arztliche Kosmetik," ed. by H. Th. Schreus, Dr. Alfred Hüthig Verlag-Heidelberg. 236 pages, over 200 illustrations.

This is a collective book, with contributions by a number of authorities participating at the first German symposium for "esthetic medicine" in Düsseldorf in 1955. Approximately one-half of the papers relate to the various aspects of plastic surgery, while the other half deal with the cutaneous effects of topical application of different chemicals.

F. Schmidt-La Baume (Mannheim) contributes a general chapter on the biological aspects of ointment formulas, with a discussion of the functional fitness of the several types of vehicles for specific medication. Emulsions in pharmacy and cosmetic chemistry are dealt with by G. Lietz (Düsseldorf), with mention of some of the newer polyoxyethylene derivatives of hexahydric alcohols and their mono-esters. Special consideration is given to sperm oil and its processing which yields a variety of useful products including "Cetiol," "Lanette N" and "Lanette E"; all of these enjoy considerable acceptance abroad in the formulation of pharmaceutical and cosmetic emulsions.

"Unsaturated Compounds in Dermatology and Cosmetics" is the subject of the contribution by W. Schneider and H. Wagner (Augsburg). Reference is made to the favorable, antikeratotic action of vitamin A and of unsaturated fatty acids in acne vulgaris and acne conglobata. Stimulation of granulation by unsaturated compounds was observed in ulcus cruris varicosum, also in X-ray ulcerations. Mention is made also of the undesirable side effects of highly unsaturated fatty acids (e.g., linoleic acid) caused by their tendency to resinification ("drying oils").

The article by H. Gohlke (Frankfurt/M), considers the absorption. penetration and skin tolerance of different excipients. The author expresses the view that cleansing creams (also massage creams) require no "depth action," in view of the short period of time during which they remain on the skin, whereas the application of conditioning creams (with hormone, vitamin or enzyme action) calls for the use of penetrating ointment bases, with a verified tolerance by the skin. Exceptional advantages are claimed for "Serol," a mucilagenous, hydrophilic material made from "milk serum and a water soluble protein."

C. Carrié and H. Wüst (Düsseldorf) discuss the role of surface lipids which compose the continuous film covering the entire skin. This film is credited with the following

physiological functions:

1. it regulates the water content of the skin with the aid of its hydrophobic and hydrophilic components,

2. it promotes direct skin permeation by lipoid soluble substances, or indirectly, by enhancing the solubility of substances of low intrinsic lipoid solubility,

3. it contributes to the protection of the skin against chemical, physical and microbial agents.

Since soaps, detergents, alcoholic lotions, etc. are capable of disrupting this protective film, it is desirable to achieve its restoration by artificial means, whenever necessary; logically, the replacement material should correspond to that of the original film-forming substance both qualitatively and quantitatively.

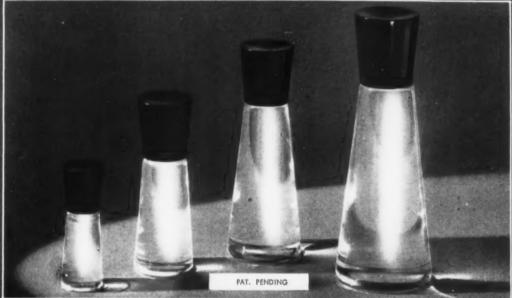
Of the several contributions dealing with the therapy of skin diseases, mention should be made of the paper by R. Kaden (Berlin) on the treatment of fungus infected nails with fungistatic nail polish. A discussion of the other papers which are deemed to be of a lesser interest to the cosmetic chemist, would exceed the limits of this review .-

E. G. Klarmann

## Presenting the NEW exquisite

with the new FUTURA CAP. shown in black-also comes in brilliant GOLD-COTE... bright touches of elegance for the purse or boudoir.





Observe the beautifully angled silhouettes of these EXQUISITE new perfume bottles, and note the perfectly blending FUTURA caps. When you consider that each is fitted with the fabulous SPILLPROOF feature, you can understand why we are so enthusiastic about them.

in 1 dram,  $\frac{1}{2}$  ounce, 1 ounce, and 2 ounce sizes

Write now for samples and prices.

Spillproof perfume bottles are the magic perfume containers that have launched millions of sales slips - their customer appeal and proved acceptance will help the sales of your product.



OFFICE & PLANT: 3618 OCEANSIDE RD., OCEANSIDE. N. Y. SHOW ROOMS: 350 FIFTH AVE., NEW YORK





## 1. HELEN NEUSHAEFER

Making their debut in the Helen Neushaefer Nail Polish and Lipstick line are two new fashion shades—Lady in Red and Pink Tangerine. Lady in Red is a true red; Pink Tangerine, a pink-orange shade. The nail polish with Plasteen, a secret chip-proofing ingredient, retails for 15¢. The "Color Teller" Tip Lipstick is 39¢ plus tax.



## 2. HOUBIGANT

For back to school selling, Houbigant pairs a one ounce bottle of Chantilly hand lotion with toilet water for \$2.00, plus tax. According to the manufacturer, the lotion contains protecting silicone and healing allantoin.



## 3. SEAFORTH

Regimental Trio is the name given to a new gift package that contains miniature crystal-clear jugs of three Seaforth grooming aids . . . shave lotion, cologne, and talc. The scent is heather. Military red and gold are the colors of the joined cartons, each decorated with the shako-topped head of a Seaforth highlander.

## 4. GERMAINE MONTEIL

Germaine Monteil introduces two new sun preparations, Pour Le Soleil and Super-Sol Creme. Pour Le Soleil is a coffee colored gelee which the manufacturer claims has a dual screening action, and does not attract dust or sand. Super-Sol Creme leaves a slight bloom on the skin and may be used as a summer powder base. Both come in  $3\frac{1}{2}$  ounce tubes, brightly decorated in red, orange, yellow and brown. Price for each is \$2.00.

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## 5. H.G.B. PRODUCTS

Three new foot preparations are now being distributed by Hadox Corp. through Hosiery and Shoe departments. Wingfood Powder is packaged in an aerosol can and decorated with light blue floral spray and burgundy lettering. Fancy Feet is a pink lotion, packaged in a polyethylene bottle with grass green floral design. Wingfoot Spray Cool is a cold spray that reportedly dries instantly. It is packaged in an aerosol can with light green floral design and dark blue lettering on a white background. Fancy Feet, 4 oz., \$1.50; Wingfoot Powder, 6 oz., \$1.75; Wingfoot Spray Cool, 6 oz., \$1.50.



## 6. MYRURGIA

Joya, a cologne by Myrurgia of Spain is making its debut on the summer market. Like Joya perfume and toilet water which preceded it, the flacon is jewel-faceted and goldencapped. The 134 oz. size is \$2.75, 3½ oz., \$4.50 and the 634 oz., \$7.00 (all plus tax).

## 7. HELENE PESSL

Helene Pessl's new Little Lady Gift Cabinet contains nine popular children's toiletry items. The cabinet features each product in its own niche, with the retail price clearly visible to aid self selection at the point of sale. The gift cabinet assortment is priced at \$9.75, the regular net price of the merchandise alone.

## 8. LEHN & FINK

Promising to play an important part in this year's deodorant sales picture is new Etiquet Rolit, in an unbreakable, waste-proof travel dispenser, and, the company claims, with 50% more lotion at half the price per ounce of its nearest competitor. Rolit will be packed in a pilfer-proof display carton. Advertising in Life magazine led off the Rolit promotion campaign.



8.

## Groda News

## FOR HAIR SPRAYS LANETHYL Pure Fraction of Lanolin Alcohols

- ★ plasticizer and humidity control agent for PVP
- ★ complete solubility in 98-100% ethyl alcohol
- non-oily and non-tacky film forming agent and hair conditioner (high cholesterol content)

## FOR SHAVES SUPER HARTOLAN — Mixed Lanolin Alcohols

★ superfatting agent for fine, persistent lather excellent "wet" feel

## FOR ANTI-PERSPIRANTS SOLAN — Water-Soluble Lanolin

(ethylene-oxide derivative)

Investigate:

CRODACOL FATTY ALCOHOLS CRODACOL 'O' Oley! Alcohol 'CAT' Cety! Alcohol 'S' Steary! Alcohol



CRODA, INC. 15 E. 26 St. New York 10, N.Y. MU 3-3090

## I-Qui

This Month's Quiz Master

Kurt J. Pfeiffer

Technical Director Orec-Geneva, Switzerland



QUESTION I. Is there any difference between American toiletries and those manufactured in European countries?

ANSWER. There is in many cases a marked difference in toilet products as manufactured on the two continents. This difference is noted in the taste between the American woman and the European woman. Whereas the American woman is highly concerned with the daily care and the hygiene of her skin and body, the European woman is more concerned with the beautifying effects the product will give. Also, for many types of toiletries they are still considered as luxury items among a large class of European women.

It may also be noted that there is a greater divergence in types of products in Europe with less standardization of a general line or concept. Cost factors have much to do with this as many European factories are considerably smaller than American ones, thus permitting more a "custom-made" toiletry rather than a "ready-made" item.

QUESTION II. Is there a difference between the quality of cosmetics as made on the two continents?

ANSWER. To understand this question we have to take into consideration the situation between the two continents. In the United States the uniformity of the products is universal from coast to coast and the producer has the possibility to prepare the same product anywhere with the same materials and more or less under the same working conditions. In Europe a large difference can be noted in the quality of products from one country to another; this difference is dependent upon the individual countries social character, financial position, and import possibilities. In certain European countries with a high standard of living and good buying power, the quality of the cosmetic products are excellent and are on par with American made products and in a few luxury lines could be said to be superior in certain aspects. However, there are other European countries where the quality leaves much to be desired and does not match the actual standard of the cosmetic industry.

QUESTION III. What are the possibilities for the future development of the cosmetic market in Europe?

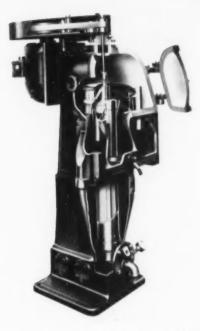
ANSWER. This question relates to the explanation given to question No. II. In countries with a good buying power, the cosmetic industry is highly active and such increase in development would parallel that of the United States—such as finding new merchandising methods, new types of products, new fields not yet fully exploited for instance a teen age group.

In the poorer countries much can be done but this must be accompanied by educative campaigns instructing the user in the necessity of the care of the skin and the needs of cosmetic products and their beneficial action.

To understand this we cite the example where in one country of 4 million people, 20 million units of dentifrice are sold yearly, while in another country with 45 million inhabitants only 10 million units are sold.

clarifi

## FLAVOR



Cut-a-way view of the Sharples Presurtite Super Centrifuge such as is used for the clarification of the essential oils.

# Centrifugal Clarification of Flavoring Materials

The use of centrifugal clarifiers enables the flavoring materials manufacturer to execute clarification operations swiftly and economically.



MORRIS B. JACOBS, Ph.D.



Mobile Westfalia Clarifier at Polak & Schwarz, Teterboro, N. J., for clarification of true fruit extracts and vanilla concentrates.

Clarification may be defined as the removal of suspended solids or immiscible liquids from a liquid mixture, suspension, or emulsion by mechanical processes. The clarification of certain flavoring materials such as essential oils and fruit juices and of flavoring products like flavoring extracts can be accomplished in a number of ways such as by settling or sedimentation, by different types of filtration, and by centrifugal clarification. Each method has its advocates.

### Centrifugal Force

In centrifugal clarification the mechanical process used is one in which centrifugal force is utilized. Centrifugal force is the inertial effect which manifests itself as a tendency of the various parts of a rotating system to get further away from the center of that rotation. The name is derived from the meaning, center fleeing. This is in reality another example of Newton's first law, namely that every body continues in its state of rest or uniform motion in a straight line unless it is compelled by an external force to change that state of rest or motion.

If one pictures a rotating governor or a boy swinging a weighted tin can tied to the end of a string and recalls what happens the effect of the motion and centrifugal force becomes clear. The weighted spheres of the governor rise until they are horizontal which is the farthest they can get from the center and the tin can sails off when the string breaks or the boy lets the string go.

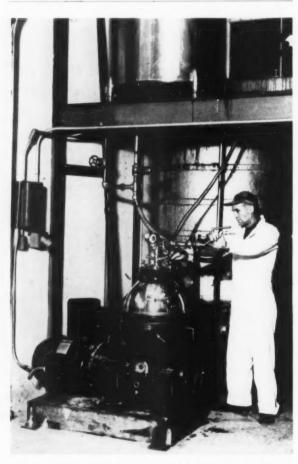
In every rotating system the tendency of the different

parts to move farther from the center is counteracted by a force which acts towards the center. This inward acting force is called centripetal or the center seeking force. The boy finds he must exert this centripetal force, that is, this inward force on the string to counteract the centrifugal force tending to make the weighted can sail off. There are similar forces acting in the case of the governor.

### Sedimentation

In a sense centrifugal clarification is related to sedimentation methods. In the latter instance, the force of gravity is used to separate the solid material from the lower specific gravity liquid in which it is dispersed or the heavier liquid from a lighter liquid, each type of material settling in accordance with its specific gravity. Thus if one had a mixture of a solid (with a specific gravity greater than water), water, and an oil, and allowed this mixture to settle, the solid would sink to the bottom, the water would form a layer above the solid, and the oil would form another layer above the water.

In the case of centrifugal clarification, this action is speeded up by the centrifugal force developed by the rotation. This force when expressed in terms of gravity is many times greater than gravity. The solid will move horizontally farthest from the center of rotation, the water will form a layer next to the solid, and finally the oil will form a third layer.



Westfalia KG-4006 Clarifier installed at Norda Essential Oil & Chemical Co. for clarifying emulsified flavoring extracts prior to spray drying.

### Clarifier Structure

In general the structure of centrifugal clarifiers may be considered as consisting of a rotating axis, a bowl or retaining wall, at times internal discs, an input port, and output ports. In the case of a system consisting of suspended solids, water, and oil, as mentioned above, the inertial response to the rotation causes the solid matter to be trapped by the bowl or against the wall, the water and the materials it has in solution moves outward and in devices provided with discs against the under surfaces of the discs and also upward to the aqueous exit port. and the oil layer is displaced relatively inward and upward to the oil outlet.

Recently Westfalia KG clarifiers have been described as designed particularly for use in the essential oil and flavoring extract industry. A unique construction is claimed for this centrifugal clarifier bowl. The KG clarifier bowl is divided into several annular chambers through which the liquid passes progressively, thus removing the solids in gradual stages governed by the size and specific gravity of the particles. As soon as the material to be clarified enters the bowl, it is subjected to centrifugal forces which remove the biggest and heaviest particle in the first chamber. Smaller and lighter particles are removed in each successive chamber, with the lightest and smallest being removed in the final, outer chamber, where the centrifugal force is greatest. In this way even the finest particles are trapped and removed.

Among the advantages claimed for the Westfalia KG clarifier are continuous, nonfluctuating clarification and a very large sludge-holding bowl. These advantages permit the operation of the machine for relatively longer periods of time before it becomes necessary to clean the bowl. It is also claimed that the efficiency of the clarifier is virtually as high at the end of a run as it is when its bowl is empty.

The Sharples Nozljector, which has been recommended for the recovery of essential oils from citrus juices is a disc type centrifugal clarifier. The solids are discharged through twelve special nozzles located around the bowl at the point of maximum diameter. The heavy phase liquid, in the case of citrus juices, the water phase is discharged at the top after being conducted upward to a port located at the top of the bowl. Some of this liquid is used to flush the nozzles through which the solids are discharged. The oil is forced toward the inside of the bowl and is conducted upward and discharged through the light phase liquid port.

### Fruit Extracts

Fruit extracts and flavors such as cherry, loganberry, peach, pineapple, raspberry, and strawberry have been clarified with the aid of Westfalia KG-2006 centrifugal clarifier by Polak and Schwarz to obtain clear foamless extracts. The hourly capacity at this plant ranged from 65 to 140 gallons depending upon the characteristics of the material being processed.

This particular type of centrifugal clarifier is so constructed that the product being clarified never comes in contact with the unclarified feed material. It is also constructed so that air cannot be entrained and thus a foamless product is assured. The Westfalia KG clarifiers are made of or lined with type 304 or 316 stainless steel.

## Fruit Juices

Mention has been made above of the use of the Sharples Nozljector for clarification and separation of citrus juices. Norda Essential Oil and Chemical Co. clarifies

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of n Rasp and ' taine home cherry, grapefruit, lemon, orange, and strawberry fruit juices with a Westfalia KG-2006 centrifugal clarifier mounted on a dolly. The raw fruit is first pressed and subsequently depectinized with enzymes. The pectin-free material is passed into the centrifugal clarifier for the removal of the insoluble solids. The clarified product is then passed into drums or processed additionally as required. The volume of operation is as high as 125 gallons per hour.

## **Spray Drying**

At Norda, flavor extracts and some liquid flavors are adjusted to 35 per cent solids by incorporating an appropriate colloidal material such as gum acacia (gum arabic). The mixture is then clarified with the aid of a larger Westfalia centrifugal clarifier such as Model KF-4006 and is then spray-dried.

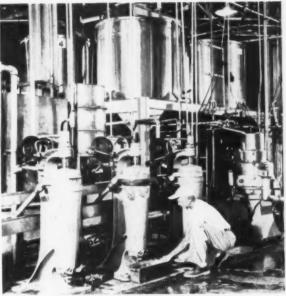
### **Essential Oils**

Centrifugal clarifiers have been used for many years for the clarification of essential oils and concentrated flavors. Among the firms using the Sharples Super-Centrifuge and the Sharples laboratory size Super-Centrifuge are Dodge & Olcott, Inc., E. Fougera & Co., Florasynth Laboratories, Fritzsche Brothers Inc., H. Kohnstamm & Co., Norda Essential Oil & Chemical Co. and S. B. Penick & Co.

Magnus Mabee & Reynard, Inc., have reported that they have used centrifugal clarifiers for the clarification of cirtronella, clove, lemon, lemongrass, orange, and sassafras oils. They use two Westfalia KG-2006 centrifugal clarifiers which have built-in pumps thus eliminating the need for an outside pumping system. The capacity for these essential oils is of the order of 50 gallons per hour.

### Advantages

Clarification by centrifugal methods has certain advantages over filtration and sedimentation methods. Of course both of these methods have useful applications.



A series of clariflers in a citrus oil refinery.

At times, however, sedimentation is entirely too slow or ineffectual. Filtration methods may not be adequate because of failure to yield a sufficiently clear product or because of rapid clogging of the filter or because of an inordinate amount of time required to clean the filter and prepare it for a subsequent filtration. Sometimes a product with which such difficulties are encountered can be treated in a centrifugal clarifier to yield a finished product rapidly.

One additional advantage in using a clarifier over filtration in some instances is more complete recovery of the product. This may be as high as 2 per cent more.

For these reasons it is important to evaluate the mechanical process used for the clarification of flavoring materials and finished flavors.

## New Flavors Offered for Beverage and Ice Cream Manufacturers

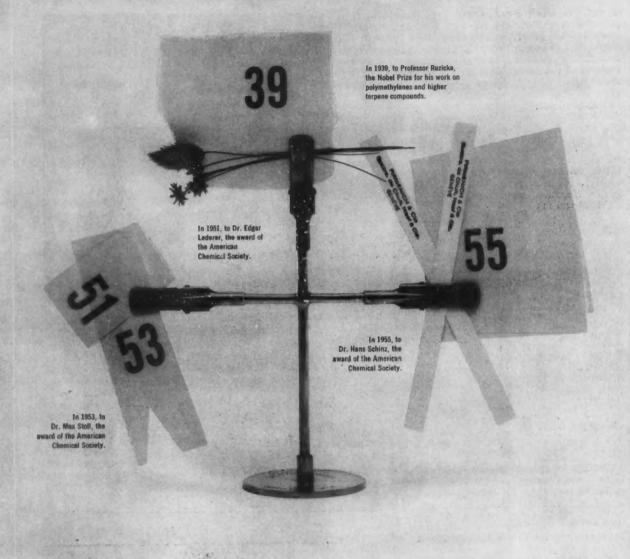
An important new group of flavoring materials of particular interest to manufacturers of bottlers' and fountain syrups, ice creams, sherbets, and cordials, has just been announced by Fritzsche Brothers, Inc. of New York.

Classified as "fruit flavors with other natural flavors," these materials are described as being made from the finest natural fruit extractives, concentrated to optimum strength for maximum flavor quality. They contain less than 50% of added flavor fortification from other selected fruits, essential oils and various botanical tinctures. These W.O.N.F. flavors, as they are known to the trade, are stated to offer certain advantages over ordinary imitation flavors. They are said to impart a more natural taste and aroma, and because they are standardized as to strength of flavor, color and acidity, are easier to use. Being concentrated, they can be stored more easily and at lower cost. Furthermore, they are less costly than the corresponding natural juices.

Fritzsche Brothers is presently offering a selection of nine different flavors—Apricot, Blackberry, Black Raspberry, Cherry, Grape, Peach, Pineapple, Strawberry and Wild Cherry. Trial working samples may be obtained by writing to the New York flavor house at their home office, 76 Ninth Avenue.



"I know I'm a big cosmetic buyer, but don't call me that!"



an award . . an award . . an award and now another award to a member of the research staff of Firmenich The harmonious coordination of industrial and scientific research, originally established by M. Philippe Chuit and Professor Ruzicka and carried forward by Dr. Max Stoll and his associates, has borne much fine fruit in the field of organic synthetics for perfumes and flavors. So these distinguished citations—the Nobel Prize and the awards of the American Chemical Society under the Fritzsche grant—bear witness. So does the increasing preference for Firmenich products as it is expressed by customers throughout the world.



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## News

## and Events

## Chloracel Price Reduction Announced by Reheis Co.

A 10% reduction in the price of Chloracel (Sodium aluminum chlordydroxy lactate complex), used in the manufacture of antiperspirant alcoholstick preparations, was announced recently by Reheis Co., Inc.

## National Chemical Credit Assn. Officers for 1957-58

At the annual meeting of the Nationa Chemical Credit Assn., Eastern Division, June 20 the following officers for 1957-1958 were elected: Chairman, Edgar B Smith, U. S. Industrial Chemical Co.; Vice Chairman, James P. Sommerville, Merck & Co.; Secretary, Oscar C. Yeager, Rohm & Haas Co.; and Treasurer, Richard G. Keyes, Olin-Mathieson Chemical Corp.

The Western Division elected the following officers: Chairman, S. S. Saporita, Ferro Chemical Corp.: Vice Chairman, O. M. Shorholm. Columbia-Southern Chemical Corp.: Secretary, Louis Stoskopf Jr., Victor Chemical Works; Treasurer, John J. Wenstrup, Goodrich-Gulf Chemicals Inc.: and Assistant Treasurer, William Kaverman, Continental Can Co.

## Collapsible Tube Council Elects Officers, Directors

The Collapsible Tube Manufacturers Council, at its regular semi-annual convention, held at Seaview Country Club in June. elected Frederic Remington president for the ensuing year. Mr. Remington, president of Peerless Tube Company, has been prominent in the collapsible tube industry for more than a quarter century.

Elected to the board of directors were: James M. Rich, Aluminum Co. of America: Werner R. Rentschler, Art Tube Co. Inc.: Charles Kleinbeck, Atlantic Manufacturing Co.: Joseph C. Steiner, Atlas Collapsible Tube Co.: William Schroeder, Michigan Collapsible Tube Co.: Louis H. C. Huntoon, National Collapsible Tube Co.: Frederic Remington, Peerless Tube Co.: L. Tracy Sheffield, The Sheffield Tube Corp.: J. H. Heideger, Standard Collapsible Tube Co.: Kenneth M. Leghorn, Sun Tube

Corp.; John E. Turner, Jr., J. S. Turner, White Metal Co.; Victor Muscat, Victor Industries; A. W. Paull, Jr., Wheeling Stamping Co.; Hubert Richter, White Metal Manufacturing Co.; and Mark K. Dresden, A. H. Wirz, Inc.

The expanding market for metal collapsible tubes was the main subject of discussion by the Council. In the past decade, according to figures presented at the convention, the use of metal tubes has doubled.

"Despite the problems that trouble the collapsible tube industry from time to time," said Mr. Remington in his address, "the growth and stability of our industry should be gratifying to all of us.

"More and more, new products are being packaged in metal tubes. And now, although it has been slow in its acceptance, foodstuff packagers are exploring the use of tubes with marked interest."

Mr. Remington pointed out, too, that the industry would eventually benefit through diversification of products, such as aerosol containers and extruded cans of all types.

## Begum Liaquat Ali Khan Visits "Naarden"

N. V. Chemische Fabriek "Naarden" recently had the honor of receiving Begum Liaquat Ali Khan, Ambassador of Pakistan in the Netherlands, whose personality and charm has made her one of the most popular diplomatic representatives in that country.

The Begum was presented with a bouquet of roses upon her arrival, after which she was introduced to the Board of Directors of "Naarden" and the Lord Mayor and City Councillors of Naarden.

## \$1,500,000 Spot TV Saturation for Arpege

Playhouse Pictures, Hollywood industrial and animated television commercial studio, has produced a 10 second station identification spot for Arpege



Perfume through North Advertising.

Part of a \$1,500,000 spot saturation program for Lanvin, the commercial reminds the viewer. "It could have happened sooner, with Arpege Perfume by Lanvin."



S. B. DeMerell (left), vice-president of Anchor Hocking Glass Corporation and retiring president of the Glass Container Manufacturers Institute, Inc., hands the gavel to Edmund F. Bail, president and chairman of Ball Brothers Company, Inc., who was elected president of GCMI at the Institute's recent semi-annual membership meeting.



Relaxing in the D&O hospitality suite during the recent C.S.M.A. Convention in Chicago are, from left to right: Paul Sperry, D&O sales manager; Mr. F. A. Geary, Mr. R. M. Funks and Mr. J. F. Brandenburg, all of Standard Oil Co.; and Kenneth Hartley, branch manager of the D&O Chicago office.

## SCC of Great Britain Holds Annual Meeting

At the Annual General Meeting of the Society of Cosmetic Chemists of Great Britain, the following Officers and Members of Council were elected for 1957/1958:

President: J. Pickthall, F.R.I.C.; Vice-President: A. W. Middleton, B.Sc., Ph.D., F.R.I.C.; Hon. Secretary: F. Riley: Hon. Treasurer: R. E. Spate; Members of Council: G. A. Pitt, M.Sc., A.R.I.C., A.M.I.A.; P. G. Gugenheim, M.A., A.R.I.C.: E. Polan.

The following serve for a further year as members of Council: Drs. H. W. Hibbott, W. Mitchell and W. W. Myddle-ton.

At the close of the business meeting the retiring President, Mr. R. T. Dobson, gave an address on "Marketing Trends".

Beginning with a review of the Cosmetic Industry in America, Mr. Dobson, gave an encouraging pre-view of thingsto-come in the Cosmetic Industry in Western Europe. The varied climatic and geographical conditions and the diverse racial types in America gave rise to variations in complexion, the texture and dryness or oiliness of the skin creating demands for special cosmetic preparations.

The vast home market in America, serving a population of 165 million people in an area of 3 million square miles gave the Cosmetic Houses an opportunity to buy in bulk and employ extensive mechanisation, so reducing production costs and opening up their products to a much wider income group in the market. The United Kingdom has a population of 51 million in an area of 94 thousand square miles and, Western Europe has 280 million people in an area of 1.15 million square miles, giving a density of population in Western Europe about five times that in America. In assessing the effect of this on the Cosmetic Market in Europe, it must be noted that the standard of living and average purchasing power are much greater in America.

Although figures are not available for expenditure on Cosmetics, Mr. Dobson gave interesting statistics of the sums spent on Personal Care and Health in different countries during the past twenty years, showing rapid increases in all. The development of the European Economic Community and the prospect of a Scandinavian Common Market open up the possibility of a Western European Market for Cosmetics similar to that in

existence in America and influenced by similar variations in climatic and geographical conditions and variation in racial types. At the present moment, Great Britain is excluded from the European Economic Community because of difficulties connected with Imperial Preference, but it is likely that these difficulties will be resolved.

Mr. Dobson explained that not all lines popular in the United States prove equally attractive elsewhere: for example, face cleansing creams and lotions and nourishing creams have a higher rate of usage in U.S.A. than in the United Kingdom. It may be expected that Western European markets will show increasing sales of these products and of tinted liquid make-up and also possibly of the high-stain type of lipstick. Aerosol packaging may also be expected to spread in Europe.

There is a prevailing tendency in Western Europe towards a higher standard of living and this, coupled with an expected increase in population of 18 millions during the next fifteen years points to a very active future for the Cosmetic Industry.

## Breck Wins Key of Achievement Award

John H. Breck, Inc., was recently presented with the "Key of Achievement" Award by the Student Market Institute at the Fourth Annual Student Market Clinic held in New York City.



The Perfume Chemoderm Study of Firmenich shown in the Scientific Exhibit, Dermatological Section on the American Medical Assn.'s 106th annual meeting held recently in New York. The exhibit is the work of Drs. Raymond A. Osbourn, Thomas W. Tusing and Francis P. Coombs, all of the Georgetown University Medical Center. The basic natural substances in perfumes were shown together with a graphic representation of their geographic sources. Also shown were the results of seven and one-half years of study of perfumery components to make ten reproducible standardized basic perfumes of low sensitizing index. Dr. Osbourn has been invited to display this work at The Royal Institute of Technology in Stockholm later this summer.



The Bourjois National Sales Meeting was held on June 10 at the Statler Hotel in New York City. Company executives photographed during a break in the meeting are, left to right, Lewis F. Bonham, president; Frank X. Patrey, vice president; Janet Myers, publicity director; Henry O. Dow, vice president; Joseph S. Keating, national field sales manager and Joseph Lawrence, advertising manager.

## U.S. Chemists to Attend International Conference

Scientists and executives from the U. S. cosmetic industry will participate in an international scientific conference in London and in technical meetings in Paris and Geneva during July and August.

Under the sponsorship of the Society of Cosmetic Chemists, fifty American delegates will arrive in Paris on July 28. There they will attend a seminar on cosmetic science arranged by the Societe Française de Cosmetologie.

In Geneva, the Swiss Society of Cosmetic Chemists will be host to the U. S. Society delegation. Scientists from both groups will present papers at a seminar in Geneva on August 2. Switzerland is an important center in the production of perfume materials and the Americans will observe the operations of the industry there.

On August 7, 8, and 9, the group will be in London to attend an international conference at the Royal Society of Medicine. Entitled "The Biology of the Hair Follicle and Growth of Hair," the scientific meeting is being held by the British Society for Research on Aging, with the cost of the Symposium underwritten by County Laboratories, Ltd. The idea of a comprehensive conference on hair originated with Dr. Robert H. Marriott, Director of County Laboratories and past president of the Society of Cosmetic Chemists in Great Britain.

Officers of the American Society of Cosmetic Chemists who will attend the Paris-Geneva-London meetings are:

President Sabbat J. Strianse
Secretary Robert A. Kramer
Director S. F. Coneybear
Chairman M. G. de Navarre
Chairman H. Jerome Amsterdam
Chairman Edward Morrish
Chairman Walter Wynne
Chairman Joseph Kalish
Past President Donald H. Powers
The group is scheduled to return to
New York on August 12.

## New Packaging Company Formed

Federal Packaging and Partition Co. has been formed for the purpose of manufacturing interlocked assembled partitions. Associated with this company will be George Bell and Gordon Nash. George Bell pioneered the development and use of partitions in Canada while Gordon Nash was in charge of packaging for the largest glass packer there.

## Entertainment For NBBMA Convention

Edward J. Breck, NBBMA convention chairman, announces that a program of topflight entertainment and music is being arranged for the 16th Annual Convention of the NBBMA, to be held in the Hotel Statler, NYC, August 9-10.

## Fritzsche Elects Officers and Directors

At a meeting of the Board of Directors of Fritzsche Brothers, Inc., recently, John L. Cassullo was re-elected president, along with Ernest Guenther, Frederick H. Leonhardt, Jr., and H. P. Wesemann, vice-presidents, Ellis Merkl, assistant treasurer, and Arthur J. Hemminger, assistant secretary. Edward E. Langenau, director of the essential oil and chemical firm's Analytical Laboratory, was elevated to the position of vice president. The firm's Board of Directors also was re-elected. At the same meeting, Frederick W. Richter, factory manager, was made director of the Clifton Factory and Laboratories.

## van Ameringen-Haebler Adds 15 Distillation Units

As part of a \$1,500,000 expansion program for its Union Beach plant, van Ameringen-Haebler has just completed the installation of 15 distillation units for the production of aromatic chemicals for the soap and perfume industry.



Miss Janet Corrigan of Huntington, N.Y., who is Miss New York State in the forthcoming Miss America Beauty Pageant, cuts the ribbon as she welcomes Luzier's, Inc., to Hempstead at the opening ceremonies of the firm's first branch office in New York State. A subsidiary of Bristol-Myers Co., Luzier's manufactures a complete line of cosmetics. Miss New York State is assisted by Hempstead's Mayor William O. Gulde and John M. Phyfe, Vice President in Charge of Sales of Luzier's.



Carroll Johnson, Research Director for all Breck Surveys and Edward J. Breck, President of John H. Breck, Inc., right, look over a chart denoting the growth of sales of John H. Breck, Inc. over the past ten years during the formal presentation on the Tenth Annual Breck Survey of Beauty Shop Attendance.

## Pharmaceutical Research Group Hears Talk by Dr. Francis Mina

Dr. Francis A. Mina, technical director of Lodes Aerosol Consultants, Inc. was the guest speaker at last month's meeting of the Pharmaceutical Research Discussion Group, which is made up of key technical personnel of the major pharmaceutical companies. The group meets monthly in East Orange, N. J. Dr. Mina covered phases in the aerosol field including various pressurized principles, containers, valves and formulations.

## Dragoco Inc. Moves to New Offices in New York City

Dragoco Inc. is now located in its new and larger quarters at 250 West Broadway, New York. Offices, laboratories and the stockroom occupy the entire seventh floor. Better facilities are provided for the manufacture and shipment of perfume and flavor specialties. Research and development occupy two modern laboratories. The new telephone number is CAnal 6-5813-4-5.

## A. L. van Ameringen Honored on Double 40th Anniversary

In recognition of the fortieth anniversary of his coming to the United States when he embarked in business for himself, Arnold L. van Ameringen, chairman of the board of van Ameringen-Haebler was honored by a group of old friends and associates in a celebration dinner at the Hotel Pierre, New York, N. Y. on the evening of June 17. The following day Mr. van Ameringen flew to Europe.

A native of The Netherlands Mr. van Ameringen organized his own company after a brief term as U. S. representative of a European perfume manufacturer. Through growth and merger the company has become one of the important elements throughout the world of the fragrance and flavor industries.

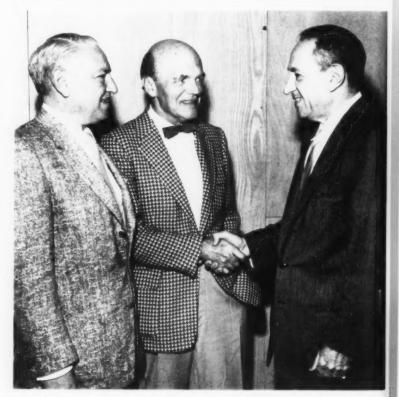
## R. G. Fairbanks New President of T. G. M. A. of Canada

R. G. Fairbanks, president of the Fairbanks Soap Co. Ltd., Toronto, Canada is the new president of the Toilet Goods Manufacturers Assn. of Canada, Mr. Fairbanks founded the Fairbanks Soap Co. in 1935. The company is now a subsidiary of Purex Corp. Ltd. of South Gate, Calif.

## New Plastic Nail Make-up on Sale late in July

A new plastic nail make-up called Ten Day Press-on Nail Color offered by Harrison Laboratories, a division of Technical Tape Corp., Morris Heights, N. Y. will be on sale in New York late in July.

The make-up consists of a strip of thin plastic film cut into appropriate sizes and shapes. There are 12 digits or every type, shape and size of female finger nail. A woman selects the rounded piece of plastic fitting the particular nail and applies the petal by pressing it on. The top is then filed off along the natural cutlines of the nail. The new product is offered in ten shades, and is said to prevent peeling and cracking when the hands are exposed to soap, detergents or other chemicals.



During his stay in Los Angeles where he addressed the California Cosmetic Assn. and the Los Angeles Advertising Club, Stephen L. Mayham, executive vice president of the Toilet Goods Assn. called at the Max Factor & Co. offices. In the picture are Davis Factor, chairman of the board and a former president of the T.G.A., Mr. Mayham and Max Factor Jr. president of Max Factor & Co.

## Helene Curtis Announces Executive Appointments

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Helene Curtis Industries, Inc. has announced the following executive appointments: Joseph J. Galietto as field sales manager of the company's Lentheric Division; John E. Hartlein as new products manager; Miss Lynn Boland as brand manager of Lentheric fragrances; Paul Holly as customer relations manager and office manager; and James Hubbard as divisional sales manager for Kings Men and Lentheric, with head-quarters in Los Angeles.

## Daughter of Edward A. Bush Married June 22

Miss Jean C. Bush, eldest daughter of Edward A. Bush who is well known throughout the essential oil and aromatic chemical industries, and Mrs. Bush, was married June 22 in the Community Church, Mountain Lakes, N. J. to Richard Jordan Jr. of Phoenix, Ariz. Mr. Jordan is pursuing his studies at present as an expert in hotel management. On their return from their honeymoon Mr. and Mrs. Jordan will reside in New York City. Burton T. Bush, one of the very well known figures in the allied industries who retired some time ago, came up from his home in Orlando, Florida to attend the wedding.



Miss Mala Rubinstein (Mrs. Victor Silson) pictured with Michel Mascicki, son of the late President of Poland.



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    OIL OF LEMON CAL.

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Dr. Emery D. Robert, left, research director of Lady Esther, discusses the formula of their new Dry Skin Cream especially developed for "drychosis"—this company's term for a dry skin condition—with E. Allen Newcomb, president of Malstrom Chemical Corporation.

## Arthur C. Trask Co. Moves to Larger Quarters

After more than 30 years in one location, the Arthur C. Trask Co. have moved their executive offices to 32? South LaSalle St., Chicago 4.

## Denver Drug and Gift Market August 4-8 to Include Cosmetics

Cosmetics are included in the drug and gift market to be held in Denver, August 4-8. The affair is held under the auspices of Denver Markets, Inc.

## Charles of the Ritz Opens New Salon

The Charles of the Ritz Salon that was formerly located on the second floor of the Drake Hotel in Chicago has moved to the arcade floor.

## Dr. Goodman to Address Dermatological Congress

Dr. Herman Goodman, author of several books on cosmetics and dermatology and Mrs. Goodman departed by airplane July 8 for an extended tour through the Scandinavian countries. He will speak before the International Dermatological Congress in Stockholm early in August and will attend the symposium on the biology of hair growth in London. August 6-9. In January and February 1958 Dr. and Mrs. Goodman plan to visit the Fiji Islands, New Zealand, Australia, Cocos and Maritius Islands with a safari through southeast Africa returning via Lisbon. He will visit specialists in dermatology, venereology and tropical medicine in these far flung places.

## Norman Lindsay Awarded Degree

Norman Lindsay, supervisor of production and development for the Verley Chemical Co., Newark, N. J., was awarded an A.B. degree in chemistry by Rutgers University at the commencement exercises June 5.

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Rouges • Compacts

Lip Pomades

Nail Polishes

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### Tess Tinker Retires From Shulton

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Tess Tinker retired from Shulton, Inc., June 1st, climaxing a life-time career with the company that began when the late William L. Shultz relinquished control of his Lightfoot Schultz Co. in 1933, and, bringing her with him as secretary, launched his soap and toiletries firm.



Tess Tinker

Mrs. Tinker had worked with Mr. Shultz for six years as his secretary before he founded Shulton, Inc., bringing to 30 years her association with the company and its founder. After her retirement she plans to divide her time between her home in Teaneck, N.J., and her summer home, "Rusty Anchor," in Brant Beach, N.J.



E. R. Sloan, Plant Manager of Charles of the Ritz explaining new electronic powder filler to Ernest Koenigsfeld, Director of South African operations, here on a visit to study modern production methods at the South Norwalk, Conn. plant.

### Jules O. Vollbehr Dies Suddenly at Home

Jules O. Vollbehr, president of Jules O. Vollbehr, Inc., died suddenly on June 24 at his residence in Brookville, L. I. He is survived by his wife, Mrs. Rosemarie Vollbehr, and son Robert.

### Capkovitz Manager of Aromatics Division of S. B. Penick & Co.

Steph G. Capkovitz is now manager of the Perfume. Flavor and Aromatic Chemicals Div. of S. B. Penick & Co. Edwin G. Allison is sales manager of the division and James Burgess his assistant.

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### Serge Heftler-Louiche Visiting New York

Serge Heftler-Louiche, president of Parfums Christian Dior, arrived in New York recently for a visit of several weeks. Mr. Heftler-Louiche is in the United States primarily to complete plans to launch Mr. Dior's newest perfume, "Diorissimo."

### Mary Chess Opens New Shop

Joseph A. Danilek, president of Mary Chess, Inc., has announced the opening of a new retail shop at the Lake Placid Club, Lake Placid, N. Y. The new shop will follow the plan of the quiet elegance of the Park Ave., New York City shop. It will be under the direction of Mrs. Dorothy Price of Stockbridge, Mass. Other Mary Chess shops are located in Washington, D. C.: at the Greenbrier, White Sulphur Springs, W. Va., and at Beverly Hills, Calif.

### Hazel Bishop **Guest Speaker**

Miss Hazel Bishop, who is not asso-ciated in any way with Hazel Bishop Inc., has returned from Indianapolis, Ind., where she was the guest speaker at the meeting of the Indianapolis Section of the American Chemical Society. Her topic was "The Cosmetic Industry and a Look into Its Future." While in Indianapolis, Miss Bishop visited the research laboratories of Eli Lilly & Co. and also those of the Pitman Moore Co. division of Allied Laboratories Inc.

### Kay Reed **Promoted**

Kay Reed, former assistant advertising manager for Lady Esther, has been promoted to advertising manager.

### Dana Sales Change Announced by Serra



Javier Serra

Paul Rowatt, president of Dana Perfumes, Inc., and Javier Serra, founder and creator of Dana perfumes and toiletries, jointly announce the retire-ment of Mr. Rowatt, from the active distribution of Dana products in the United States on July 1, 1957. The sale and distribution of Dana Perfumes and Toiletries throughout the United States are now handled by Dana Perfumes Corp., of which company Mr. Serra is president. Offices of Dana Perfumes Corp., are located at 201 N. Wells Street. Chicago 6, Illinois.

Dana perfumes of which Tabu is the better known, have enjoyed a marked success on the American market.

### HAIR COLORING for PRIVATE BRAND

Now, one of America's oldest and most reliable hair coloring companies has set up a private label division to handle large or small production of TINTS, DYES, COLOR SHAMPOOS, HAIR LIGHTENERS AND RINSES. All formulae have been thoroughly field tested. Please use company letterhead when inquiring.

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FLORIDA





Five affiliates have been absorbed by the Block Drug Co. and will be known as divisions of the parent company. They are: Amm-i-Dent, Inc., Pycope Inc., Hudson Products, Wernet Dental Mfg. Co. and Poloris Co. Products made by the companies will carry the Block name and company insignia.

The New England Toilet Goods Assn. toiletries show will be held Sept. 9-14 in the Somerset Hotel, Boston. There will be exhibits by 136 manufacturers of toilet articles.

Liquid Ivory, a new detergent, is being market tested in Wisconsin by the Procter & Gamble Co.

Total advertising expenditures by companies manufacturing drugs and cosmetics in 1956 were \$416.835,000 according to Publishers Information Bureau and the Television Bureau of Advertising. This amount of advertising to consumers was second only to the expenditures of manufacturers of food and grocery products.

The best run industrial corporation in the United States is the Procter & Gamble Co. according to Cyril G. Fox, president of Fels & Co., Philadelphia, a 91 year old soap manufacturing company. "It is an inspiration to watch Procter & Gamble Co. work," he said. "They give us fits and tear us to pieces but you know that you are in the ring with a champion. Staying in with them shows that we are pretty good too."

A new sun lotion in two strengths in an aerosol container called Fastan and Slotan have been launched by Coty, Inc. One protectively accelerates tanning; the other acts as a protective screen against the suns rays.

The annual convention of the National Beauty and Barber Manufacturers Assn. will be held August 9-10 in the Hotel Statler, New York, N. Y.

Indiana's fair trade act has been held to be unconstitutional by a divided State Supreme Court decision.

The Stork Club, whose proprietor, Sherman Billingsley produces the line of Sortilege perfume and cosmetics reports splendid sales of its lipstick, nail polish and compressed powder. An extensive promotion campaign has been planned.

Executive Men's Toiletries Ltd., Beverly Hills, Calif., has gone into full production of its new Executive line of men's toiletries. The introductory item is a specially designed gold and black lotion-cologne set featuring a patented permanent container that can be refilled easily. Paul Klein is president of the company.

The first 100 ladies attending the movie Funny Face in several New York theatres were given free vial of Angelique cologne—a promotion of Angelique & Co.

A new Fragrant Fern friction body lotion retailing at \$5 for an 8 oz. bottle has been launched by Alexandra de Markoff.

The largest TV schedule in the history of Max Factor & Co. began July 2, in the networks. The company televised the sixth annual Miss Universe Beauty Pageant in Long Beach, Calif., July 11-19.

A seafood tenderizer, a blend of spice essential oils and a tenderizing solution with a small proportion of sodium benzoate has been announced by Dodge & Olcott Inc. Seasoned tenderizers for meats have been in use for some time but hitherto not for seafood. The new product is designed for use prior either to quick freezing or cooking. The solution may be re-used.

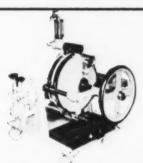
Color certification fees have been increased by the Food & Drug Administration. The new fees are covered in regulations published in the Federal Register, June 8.

New lipstick shades Lady in Red and Pink Tangerine of Helen Neuschaefer are reported to be selling well. The nail polish is stated to contain a new chip proofing ingredient.

Originally introduced as a cream Helene Curtis Industries is now offering Enden, its dandruff treatment shampoo in liquid form in a plastic bottle.

Christian Dior is to launch Diorissimo, a new perfume this Autumn.





MODEL EBW PORTABLE FILTER—This filter is recommended for small capacity requirements. Accomodates from 4 to 8 124" dia. filter disks. Easy to set-up and operate.



Will rapidly fill small or batch lots of material at lowest cost. Fills bottles to uniform height without loss of material. Interchangeable spouts for filling shaker-type bottles to gallons.



Ertel Asbestos Filter Sheets for ultra polished brilliance are used for many fine perfumes and cosmetics. Available in 10 grades to fit all standard filters. Write regarding samples for superior result tests in your filter.

Write for Illustrated Catalog





Dr. Ernest Shiftan, vice president and perfumer of van Ameringen-Haebler. Inc., has been appointed to the

Walter Wynne, cosmetic chemist of Givaudan-Delawanna, Inc., will leave New York for Europe July 21, for a

Dr. Otto Jacobi, vice president and director of research of Kolmar Laboratories, has been invited by the 11th Inter-



Dr. Ernest Shiftan

Shiftan will serve as consultant and tech-

nical adviser in the evaluation of scientific advances and industry progress, par-

ticularly with respect to developments

E. W. Kaufman will handle sales of sperm oil and chemical products in the

Philadelphia area for the Werner G.

Richard A. Dey was elected to the board of directors of Shulton at the re-

cent annual meeting of shareholders. Mr. Dey is Shulton's director of indus-

trial and public relations. He joined the

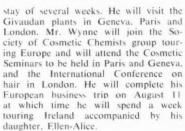
in the United States.

Smith Corp.

Walter Wynne Scientific Committee of the German publication. Parfumerie und Kosmetik. Dr.



London. Mr. Wynne will join the Society of Cosmetic Chemists group touring Europe and will attend the Cosmetic Seminars to be held in Paris and Geneva, and the International Conference on hair in London. He will complete his European business trip on August 11 at which time he will spend a week



Richard F. Steel has been appointed assistant general manager of the United States Borax & Chemical Corp., according to a recent announcement.



Dr. Otto Jacobi

national Congress of Dermatology, to be held in Sweden, to be one of the scientists to give a paper, which will be entitled "Methods for Testing the Effect on the Skin of Detergents." Dr. Jacobi will also plan to attend other scientific meetings on the continent and on the same trip will visit Kolmar's foreign operations in Paris, Offenbach, and Lon-

Philip Chaleyer, consultant perfumer for Hoffman-LaRoche Inc., Nutley, N. J., accompanied by Mrs. Chaleyer, will leave July 18 for a month's vacation tour of the Pacific coast from Vancouver to Los Angeles.



Richard A. Dey

company in 1944 as personnel manager, became director of industrial relations in 1955, and director of industrial and public relations in January of this year. Before coming to Shulton he was with General Motors Corp.



Lester Sauers

Lester Sauers has been appointed general sales manager of Lanolin Plus, Inc., Chicago cosmetic firm. Previous to joining Lanolin Plus, Mr. Sauers was general sales manager for the Helene Curtis Industries.



Edmund F. Ball

Edmund F. Ball was elected president of the Glass Container Manufacturers Institute, Inc., at a meeting of the Institute's board of trustees recently. Mr. Ball is both president and chairman of the board of directors of Ball Brothers Co.



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### ROBERT A. FORESMAN, JR.

AEROSOL CONSULTANT

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Frank A. Murdock has been appointed to direct Ungerer sales on the West Coast. Mr. Murdock's experience in the

Edward E. Langenau, newly elected vice president of Fritzsche Brothers, Inc. who joined the 86-year-old essential

Paul Gregory has been appointed vice president in charge of field operations of Avon Products. Mr. Gregory joined



Frank A. Murdock

essential oil field includes associations with two firms in this industry for some 16 years, the past 6 of which having been in the capacity of San Francisco District Manager. George MacDonald will assist Mr. Murdock with customer relations and office management.

William G. Mennen has been cited by the Common Council of the City of Detroit for his present activities in the promotion and betterment of the nation's stock outboard racing. Mr. Mennen was in Detroit for the Belle Isle outboard marathon race at the time of the presentation.



Edward E. Langenau

oil and aromatic chemical firm 21 years ago, is the director of the Analytical Laboratory and secretary of the Research Committee of Fritzsche Brothers. Inc. He has long been associated with the Scientific Committee of the Essential Oil Assn.

E. King Graves is now manager of the packaging division of the American Management Assn. In this capacity Mr. Graves will direct the division's program of educational meetings for packaging executives, a program that includes the A. M. A.'s annual National Packaging Exposition and Conference.



Paul Gregory

Avon's Kansas City office in 1934, was made division manager at the Pasadena office in 1939, and, in 1945 was transferred to the New York office as national district sales manager. Three years ago he became director of field opera-

Dr. Frank J. Steele, chief pharmacist at the Greenwich Hospital and senior vocational instructor, cosmetics and perfumes, Connecticut State Dept. of Education, will hold an adult education course in Perfumery at the Greenwich, Conn. High School with registration scheduled for Sept. 24.



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### THEIR PRINCIPLES AND PRACTICES

Ralph G. Harry

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No other book in this field gives such a combined wealth of medical and technical data on every phase of the formulation, manufacture, and use of cosmetic products.

To mention but a few examples, it discusses the skin, its nutrition and scientific care; the hair, its proper grooming, the physico-chemical problems involved in its washing, and the potential hazards to the eye mucosa of the use of some detergents; the teeth and their care, covering the present status of antibiotic, antienzymic, ammonium-ion and chlorophyll dentifrices, and the luster-producing properties of toothpaste ingredients, etc.

Much of the information in the book has its source in the research activities of the well-known author, which date back for many years and embrace the fields of chemistry, dermatology and microbiology.

In addition to the author's own work, the results of many other investigators widely scattered in the world literature have been critically evaluated and compiled in this unique volume.

The great illuminating illustrations, money-making for-mulae, and pertinent tables and a detailed time-saving index make important contributions to the usefulness of this reference work.

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# MARKET REPORT

The price trend in essential oils and aromatic chemicals was mixed over the past month. Trade fell somewhat in volume due to a combination of circumstances including the trend in general business, abnormally low temperatures in many sections of the country, and a general tendency among manu-

facturers to keep inventories down to a minimum. Flavors that normally move to the beverage trade in good volume lagged behind expectations. Orders for the account of soapers fell off due to rather sizeable purchases in March and April and takings for the account of proprietary manufacturers fell off.

### PRICE CHANGES

Advances	Current	Previous
Vanillin, lignin, resale	\$3.25	\$3.00
Tartaric acid, imported	0.42	0.40
Acetone, CP, less car lots	0.12	0.111/2
Butyl acetate, less car lots	0.1812	0.18
Butyl alcohol, less car lots	0.18	0.1752
Ethyl acetate, lb.		
85-88%	0.16	0.151/2
95-98%	0.1614	0.1534
99%	0.161/2	0.16
Cocoa butter	0.75	0.64
Corn oil, crude, tanks	0.133%	0.1234
Peanut oil, crude, tanks	0.1534	0.151/2
Declines		
Eugenol, USP	\$1.95	\$2.10
Anethol, USP, drms	1.50	1.65
Menthol, synthetic laevo	6.00	6.10
Ionones, Ib.		
Alpha, soap grade	4.30	4.40
Alpha, extra	5.15	5.25
Beta, extra	5.15	5.25
Copra, coast, ton	150.00	155.00
(Prices per pound unless otherwise spe	cified)	

### CITRUS OIL OUTLOOK BRIGHTER-

While off to a late start, the outlook regarding trade in citrus oils turned brighter at the close of last month. Some of the larger consumers in the beverage trade normally anticipate summer needs during April and May but the trend in general business, low temperatures and turn of events in the general economic situation served to make buyers extremely cautious. While it is getting rather late, dealers express a degree of optimism regarding the immediate outlook. Once warmer weather sets in, there should be a rush for oils including lime, orange, lemon, fruit flavors and several specialty items.

### GERANIUM OILS IRREGULAR-

The price trend in Algerian and Bourbon geranium oils has been irregular. After advancing to high levels in April, the oils lost some ground only to recover a portion of the losses. Greater buyer resistance served to force the temporary break in prices. Late in the period however, offers of new crop Algerian geranium oil appeared in the market. They were fully \$2.50 over last

year's opening prices. Dry weather delayed harvesting of the new crop and it is feared it will be from 10 to 15 percent below normal when final figures are completed.

### ACETATE ESTERS RISE-

As the result of steadily rising costs, acetone and acetate esters were boosted ½ cent per pound July 1 by major producers. The advance establishes the tankcar price for acetone CP at 8½ cents while carlot and less carlot prices were moved up to 11 cents and 12 cents, respectively. Other items in the group that were advanced included normal butyl acetate, normal butyl alcohol, and ethyl acetate. Tankcar price for ethyl acetate, 85-88% was moved up to 12½ cents. Carlot price is now 15 cents and the less carlot price 16 cents per pound.

### JUMP IN GLYCERIN SUPPLY-

April stocks of glycerin jumped 3 million pounds to a high level of over 71 million pounds. Based on overall purchases of crude material in various parts of the world, rather substantial imports are likely to arrive in July and

August. A shrinkage in domestic output of crude is anticipated this month (July) as soapers curtail production during the summer vacation period. Unless the rising trend in the overall supply position of the market is checked, increasing sales pressure is likely to give way to declines in refined material. Such declines are in the opinion of some trade observers long overdue, but the cost of producing synthetic material have increased thus placing manufacturers of the latter at a disadvantage, it is said.

#### EUGENOLS SOFTER-

Trade in eugenol and isoeugenol was spotty. Although stocks in makers hands were not particularly large, prices lost some ground over the past month. Major factor behind the losses was the easier trend in clove oil.

#### TREND MIXED IN CITRONELLA-

Last price movement in Formosan citronella oil was upward. For a time the oil had been offered at 95 cents a pound. The low price prevailed only a hort time due to a sudden upturn in shipping prices from the primary center. The trend in Ceylon citronella, however, was downward due to narrow demands. A report from Taipeh stated that Communist China's invasion of the citronella market caused serious concern in Formosa. About 40 to 45 percent of Formosa's exports of oil over the past few years were to the United States. An equal percentage was shipped to Europe and 10 to 15 percent to Japan, From January to May this year exports to European countries dropped suddenly to between 10 to 20 percent. Exports to Japan were reduced 10 percent while those to the United States remained about the same.

### FIRMNESS MARKS WAXES-

Renewed firmness developed in carnauba wax toward the close of last month as the result of a spurt in consumer buying and very limited offerings from Brazil. Unsold stocks of carnauba are reported to be very small in Brazil and reports from the primary center state that cutting of the new crop may not get under way until late November or early December instead of October when operations normally get underway. African crude beeswax displays a firmer trend while the bleachable grades from South America are extremely difficult to obtain on spot or for shipment.

### NEW CROP VANILLA ARRIVING-

New crop Mexican vanilla beans have started to arrive here. Prices have been firm due to limited offers. Holders have been reluctant to offer believing they should obtain full if not higher prices because of the strong statistical position in Bourbon beans. Buyer resistance to rising bean prices has been increasing, however, and it remains to be seen whether buyers will continue to resist the hardening trend.



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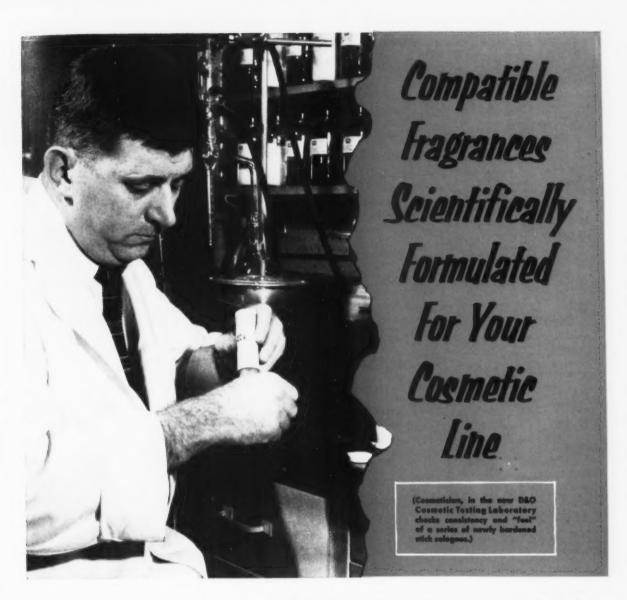
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